



# Department of Defense Dependents Schools - Europe

## 2003 AHERA ASBESTOS MANAGEMENT REPORT

**Heidelberg District  
Mannheim American High School  
Mannheim-Kaefertal, Germany**



Prepared by:  
**Baker Environmental, Inc.**  
*A Unit of Michael Baker Corporation*

**Baker**

Under Contract with:  
**U.S. Army Corps of Engineers**  
Transatlantic Programs Center

Date

**DODEA INSPECTION SCHOOL DATA SUMMARY**

<b>BUILDING INSPECTOR:</b>	William E. Gray
<b>BUILDING INSPECTOR/ MANAGEMENT PLANNER:</b>	Jeffrey C. Kolich
<b>SCHOOL NAME:</b>	Mannheim American High School
<b>DODAAC NUMBER:</b>	HE 3411
<b>DATE OF VISIT:</b>	9-14 July 2003
<b>NAME OF ASBESTOS COORDINATOR:</b>	Mr. Eric Goldman
<b>ADDRESS OF THE SCHOOL:</b>	Unit 29939 APO AE 09086
<b>SCHOOL TELEPHONE NUMBER:</b>	49-621-722261
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**DEPARTMENT OF DEFENSE  
EDUCATION ACTIVITY  
ASBESTOS MANAGEMENT PROGRAM**

**2003 AHERA Inspection Report**

**for**

**Mannheim American High School  
Mannheim-Kaefertal, Germany  
HE 3411**

**Prepared For:**

**Department of Defense Education Activity  
Logistics Division  
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The Baker logo consists of the word "Baker" in a white, bold, sans-serif font, set against a solid black rectangular background.

**Under Contract With:**

**U.S. Army Corps of Engineers  
Transatlantic Programs Center  
Winchester, Virginia**

**2003 AHERA INSPECTION REPORT  
FOR  
MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE OF CONTENTS**

**IMPORTANT FOREWORD**

**SECTIONS**

- 1.0 INTRODUCTION
- 2.0 SUMMARY OF INSPECTION ACTIVITIES
- 3.0 ASSESSMENT AND SAMPLING METHODS
- 4.0 RESULTS OF THE INSPECTION
- 5.0 RECOMMENDED MANAGEMENT ACTIONS

**TABLES**

- 4.1 Results of the Inspection
- 5.1 Recommended Management Actions

**APPENDICES**

- A AHERA Accreditation Statement and Inspectors' Certificates
- B Glossary
- C Plans of Sample Locations
- D Laboratory Sample Analysis Reports

## IMPORTANT FOREWORD

The information presented in this report satisfies the reporting requirements of the AHERA legislation and DODEA policy regarding asbestos inspections conducted in DODEA facilities worldwide.

Under DODEA Asbestos Management Policy, the principal is the Asbestos Coordinator for this location. Prior to any activity that is likely to disturb building materials, the principal is responsible for ensuring that a thorough review of materials identified in this report has been completed.

**FOR A SUMMARY TABULATION OF WHERE ASBESTOS WAS FOUND, AND WHAT SHOULD BE DONE ABOUT IT, PLEASE REFER TO TABLES 4.1 AND 5.1 PRINTED ON BLUE-TINTED PAPER.**

Please also note that not all building materials have been tested. Examples of this may be materials which are hidden from view, inaccessible, or where sampling would be destructive. **THEREFORE, THERE IS NO ASSURANCE THAT UNTESTED MATERIALS ARE ASBESTOS-FREE.**

## **1.0 INTRODUCTION**

As part of the Department of Defense Education Activity (DODEA) Asbestos Management Program, Baker Environmental, Inc. (Baker) has been contracted to inspect each Department of Defense Dependents Schools (DODDS) location for suspected, known, or assumed friable and non-friable asbestos-containing materials (ACM), in accordance with 40 CFR Part 763, Subpart E, the governing regulations of the Asbestos Hazard Emergency Response Act (AHERA). Technical management of the DODEA Asbestos Management Program is being carried out by the U.S. Army Corps of Engineers, Transatlantic Programs Center (USACE-TAC).

In preparation for this inspection, Baker staff reviewed previous asbestos information related to this location and available to Baker.

The inspection included the following activities:

- Identification of all previously known or previously assumed friable and non-friable suspected ACM.
- Identification and sampling, by homogeneous area, of any newly identified suspect ACM.
- Sampling of previously assumed ACM, if accessible.
- An assessment of all suspected, known, or assumed ACM.

Baker provided independent sample analyses under the approved Environmental Protection Agency (EPA) method described in 40 CFR Part 763, Appendix A, Subpart F, by subcontracting the analyses to laboratories accredited in accordance with standards set by the U.S. National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP).

This report provides:

- a summary of inspection activities at this location;
- a description of the assessment and sampling methods employed;
- a table summarizing the results of the inspection and sample analyses; and,
- recommendations for management actions for asbestos materials.

The four appendices include:

- a statement of AHERA accreditations and inspector certifications;
- a glossary of terms frequently used throughout the report;
- plans identifying the locations of samples taken during this inspection with room numbers and names used in the tables; and,
- the laboratory sample analysis reports.

## 2.0 SUMMARY OF INSPECTION ACTIVITIES

The inspection of Mannheim American High School was conducted on 9-14 July 2003, by a Baker field team. Team member names and credentials are in Appendix A.

The following list documents prior asbestos management activities at this location:

Final Survey Report, Mannheim High School, GE 3411, October 1988, by Dynamac Corporation

Pre-Design Report, Mannheim High School, GE 3411, November 1990, by Baker/TSA, Inc.

1991 AHERA Reinspection Report, Mannheim High School, GE 3411, November 1991, by Baker/TSA, Inc.

1994 AHERA Inspection Report, Mannheim High School, GE 3411, by Baker Environmental, Inc.

1997 Triennial Asbestos Resurvey Report, Mannheim High School, GE 3411, by Baker Environmental, Inc.

2000 Triennial Asbestos Resurvey Report, Mannheim High School, HE 3411, by Baker Environmental, Inc.

Baker's field team met with Mr. Tony Michael, Supply Technician for Mannheim American High School, at the beginning of the inspection. The following facility utilization was identified:

<b>BUILDING NUMBER (Year Built)</b>	<b>FUNCTION</b>
0286 (Unknown)	Multipurpose
0286C (Unknown)	ROTC
0736 (Unknown)	Gymnasium



<b>BUILDING NUMBER (Year Built)</b>	<b>FUNCTION</b>
0746 (Unknown)	Music, Graphic Art

According to Mr. Tony Michael, no buildings have been vacated, and no new buildings have been occupied since the last AHERA inspection. No renovations have occurred in the buildings that comprise Mannheim American High School since the last AHERA inspection.

In the course of this inspection, 42 suspected or known asbestos-containing homogeneous materials were sampled and/or assessed in the buildings listed above. In addition to sampling and/or assessing the suspected or known asbestos materials, the Baker field team verified the location of previously identified non-asbestos materials. Specific information about each of these materials, including the results of the sample analysis, can be found in Section 4.0 of this report.

In Building 0286, the previous AHERA inspection identified 14 ACM: sheet gasket (Material Number 004), three types of vinyl floor tile (Material Numbers 005, 007, and 032), cement duct (Material Number 006), three types of cement wall panels (Material Numbers 026, 035, and 038), and six types of floor adhesive (Material Numbers 046, 047, 084, 089, 090, and 091). All of the previously identified ACM were located, assessed, and their quantities were confirmed. Six square feet of one type of floor adhesive (Material Number 089) are exposed and need to be repaired. The Baker field team identified and sampled 13 additional suspect asbestos materials: two types of sheet gasket (Material Numbers 133 and 134), five types of floor adhesive (Material Numbers 135, 137, 140, 142, and 145), vinyl floor tile (Material Number 136), wallboard (Material Number 138), joint compound (Material Number 139), ceiling tile (Material Number 141), and two types of vinyl floor sheeting (Material Numbers 143 and 144). One type of sheet gasket (Material Number 133), vinyl floor tile (Material Number 136), and one type of floor adhesive (Material Number 137) tested positive for asbestos. Three square feet of the vinyl floor tile (Material Number 136) are damaged and need to be repaired. All of the other newly sampled materials tested negative for asbestos.

In Building 0286C, formerly known as Building 0001, the previous AHERA inspection did not identify any ACM. The Baker field team did not identify any suspect asbestos materials and collected no samples.

In Building 0736, the previous AHERA inspection identified one ACM, sheet gasket (Material Number 055). This previously identified ACM was located, assessed, and its quantity was confirmed. The Baker field team identified and sampled six additional suspect asbestos materials: ceiling board (Material Number 127), joint compound (Material Number 128), two types of sheet gasket (Material Numbers 129 and 130), and two types of thermal pipe insulation (Material Numbers 131 and 132). One type of sheet gasket (Material Number 130) tested positive for asbestos. All of the other newly sampled materials tested negative.

In Building 0746, the previous AHERA inspection identified five ACM: two types of vinyl floor tile (Material Numbers 003 and 008), fire door lining (Material Number 053), cement wall panels (Material Number 055), and floor adhesive (Material Number 070). All of the previously identified ACM were located, assessed, and their quantities were confirmed. Thirteen square feet of one type of vinyl floor tile (Material Number 003) and six square feet of the other vinyl floor tile (Material Number 008) are damaged and need to be repaired. The Baker field team identified and sampled three additional suspect asbestos materials: floor adhesive (Material Number 146), sheet gasket (Material Number 147), and caulk (Material Number 148). The caulk (Material Number 148) tested positive for asbestos. Both of the other newly sampled materials tested negative for asbestos.

### 3.0 ASSESSMENT AND SAMPLING METHODS

#### Assessment

An assessment was performed by accredited inspectors in conformance with Part 763.88 of the AHERA regulation for inspections [Section 763.85(b)], and guidelines in EPA Publication No. EPA 56015/85-024, "Guidance for Controlling Asbestos-Containing Materials in Buildings" ("The Purple Book") and EPA Publication No. EPA 700/B-92/001 "A Guide to Performing Reinspections Under The Asbestos Hazard Emergency Response Act (AHERA)", for all friable and non-friable known or assumed ACM in each school building at this location. Each homogeneous material was classified into one of the following categories:

1. Damaged or Significantly Damaged Thermal System Insulating ACM
2. Damaged Friable Surfacing ACM
3. Significantly Damaged Friable Surfacing ACM
4. Damaged or Significantly Damaged Friable Miscellaneous ACM
5. ACM with the Potential for Damage
6. ACM with the Potential for Significant Damage
7. Any Remaining Friable ACM or Friable Suspected ACM
- N/A Any Remaining Material Assessed and Found to be Not Applicable to Any of the Seven Previous Categories

Definitions of these categories are contained in the glossary (Appendix B).

The inspectors considered the following factors to determine the above classifications:

- |                        |                            |
|------------------------|----------------------------|
| • Location of Material | • Amount of Material       |
| • Friability           | • Accessibility            |
| • Type of Damage       | • Influence of Vibration   |
| • Percent of Damage    | • Influence of Air Erosion |
| • Overall Condition    |                            |

## **Sampling**

Each inspector utilized the sampling methodologies described in Part 763.86 of the AHERA regulations, in addition to guidelines described in EPA Publication No. EPA 560/5-85-030a, "Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials", and EPA Publication No. EPA 560/5-85-024, "Guidance for Controlling Asbestos-Containing Materials in Buildings", Appendix G. Inaccessible suspect materials were assumed to be asbestos-containing, as provided under the regulations.

Prior to shipment to a United States laboratory, each sample was properly sealed and labeled. Chain-of-custody documentation was sent to the laboratory with the samples.

#### 4.0 RESULTS OF THE INSPECTION

Results of the inspection are presented on Table 4.1. The information on Table 4.1 is presented by building. Within each building, the information is grouped as follows:

- The first group contains all previously identified ACM that were confirmed to be present during the 2003 inspection, and any newly identified ACM.
- The second group contains all previously identified non-asbestos materials that were confirmed to be present during the 2003 inspection, and any new material identified during the 2003 inspection which was determined to be a non-asbestos material by sample analysis.
- The third group contains all previously identified materials, both asbestos and non-asbestos, which could not be confirmed to be present during the 2003 inspection. If the disposition of such material could be determined by the Baker field team, this information was noted in the comments section of Table 4.1.

Headings on Table 4.1 are defined as follows:

**INSPECTION DATE** - Date when this location was visited by a Baker field team to conduct the 2003 inspection.

**BUILDING NUMBER** - Identifies each building included in the report. If the date of construction was known, this information is presented in the parenthesis after the building number.

**HOMO. MATRL. NO. (Homogeneous Material Number)** - Numerical designation assigned to each homogeneous material that is uniform in color and texture, serves the same function, and was installed at the same time.

**MATERIAL TYPE/MATERIAL DESCRIPTION** - Brief description of the material, followed by information on distinguishing characteristics which may include function, size, color, shape, etc., if necessary.

**AHERA CAT. (AHERA Category)** - SACM-Surfacing Asbestos-Containing Material; TSIACM-Thermal System Insulation Asbestos-Containing Material; MACM-Miscellaneous Asbestos-Containing Material.

**MATERIAL LOCATION(S)** - Material locations as confirmed by the 2003 inspection. The material location(s) can be referenced to the floor plans in Appendix C of this report. The floor plans indicate room numbers and layouts as they existed at the time of the 2003 inspection. If a space within a building was not identified with a room number and materials were determined to be present in that space, the Baker field team assigned the space with a number and recorded this number on the floor plan. Material locations for those materials which could not be confirmed to be present at the time of the 2003 inspection are identified in those rooms where they are believed to have existed.

**QTY. (Quantity)** - Defined as linear footage (LF), square footage (SF), or number of each material contained in a homogeneous area.

**SAMPLE INFORMATION** - Provides information pertinent to the material sample as follows:

- **NUMBER** - A unique identification number assigned to each material sample collected.
- **DATE** - Collection date for the sample.
- **RESULT** - Analytical information provided by the laboratory. For those samples which were determined to have asbestos, the percent and type of asbestos is identified. The abbreviations used for the analytical results are:

AC = Actinolite

CH = Chrysotile

AM = Amosite

CR = Crocidolite

AN = Anthophyllite

TR = Tremolite

ND = "None Detected" - No asbestos was detected in the sample

The analytical reports for all samples collected during the 2003 inspection are included in Appendix D of this report. Analytical reports for samples collected during previous inspections are included with the historical records for this location.

**FRIABLE** - A material is considered friable if, when dry, it may be crumbled, pulverized, or reduced to powder by hand pressure.

**OVERALL CONDITION** - Overall condition of the material is characterized as follows:

- **UNDAMAGED** - The material is in visibly good condition with no apparent damage.
- **DAMAGED** - The material exhibits some damaged areas. In the case of localized damage, less than 25% of the material exhibits damage. In the case of distributed damage, less than 10% of the material exhibits damage.
- **SIGNIFICANT DAMAGE** - The material exhibits extensive damage. In the case of localized damage, equal to or greater than 25% of the material exhibits extensive damage. In the case of distributed damage, equal to or greater than 10% of the material exhibits extensive damage.

If the material is damaged or significantly damaged, the distribution of the damage will be assessed as either Localized (LOCAL) or Distributed (DIST.).

**ACCESS. (Accessibility)** - A rating placed on a material which considers the accessibility for potential contact. It is ranked into one of three categories:

- **HIGH** - The material is readily accessible to building occupants.
- **MED** - The material is not so readily accessible to building occupants.
- **LOW** - The material is not easily accessible to building occupants.

**EPA ASS. CAT. (EPA Assessment Category)** - A damage classification from 1 to 7 as defined by the AHERA for known or suspect ACM:

1. Damaged or Significantly Damaged Thermal System Insulating ACM
2. Damaged Friable Surfacing ACM
3. Significantly Damaged Friable Surfacing ACM
4. Damaged or Significantly Damaged Friable Miscellaneous ACM
5. ACM with the Potential for Damage
6. ACM with a Potential for Significant Damage
7. Any Remaining Friable ACM or Friable Suspected ACM
- N/A Any Remaining Material Assessed and Found to be Not Applicable to Any of the Seven Previous Categories

**MANAGEMENT ACTION** - The recommended action based on the EPA assessment category and on the judgement of the inspector based on activities of the occupants. For each asbestos material, at least one of the following management actions pertaining to all or portions of the material will be selected:

- **ENCLOSE** - Installation of an airtight, impermeable, permanent barrier around the ACM.
- **ENCAPSULATE** - Treatment of ACM with a penetrating or surface sealant in order to minimize the potential for fiber release.



- **O&M** - A program of work practices to maintain ACM in good condition, ensure clean-up of asbestos fibers previously released, and prevent further release by minimizing and controlling ACM disturbance or damage.
- **REMOVE** - Removal of ACM from a damaged area, a functional space, or a homogeneous area as indicated.
- **REPAIR** - Returning damaged ACM to an undamaged condition.

**COMMENTS** - Additional comments may be provided to further describe the location or condition of materials, clarify sample results, or amplify the recommended management action.

**The following table columns contain information only if the material tested positive for asbestos and was confirmed to be present during the 2003 inspection:**

- |                     |                           |
|---------------------|---------------------------|
| • Friable           | • EPA Assessment Category |
| • Overall Condition | • Management Action       |
| • Accessibility     |                           |

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**INSPECTION DATE: 9 - 14 JUL 2003**  
**BUILDING NUMBER: 0286 (Unknown)**

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
004	SHEET GASKET (2" - 6" DIAMETER, RED, ON PIPE FLANGE CONNECTIONS)	MACM	ART SUPPLY ROOM 2, HEAT EXCHANGER AREA, HVAC 1, HVAC 2, SUPPLY ROOM	90 EA	38537	07/11/88	70% CH	NO	UNDAMAGED	LOW	5	O&M	
					38578	07/11/88	65% CH						
005	VINYL FLOOR TILE (1' X 1' ORANGE WITH RED STREAKS)	MACM	100, 105, 106	2,240 SF	38539	07/11/88	ND	NO	UNDAMAGED	LOW	5	O&M	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #046. THIS MATERIAL IS LOCATED BELOW THE EXISTING FLOORING MATERIAL.
					38542	07/11/88	5% CH						
006	CEMENT DUCT (18" X 18" X 36" GRAY, FLUE PIPE)	MACM	100, 105, 106, 200, 207, 208	28 LF	38540	07/11/88	20% CH	NO	UNDAMAGED	MEDIUM	5	O&M	
					38553	07/11/88	20% CH						
007	VINYL FLOOR TILE (1' X 1' BEIGE)	MACM	102, 212A, 214A	312 SF	38541	07/11/88	5% CH	NO	UNDAMAGED	HIGH	5	O&M	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #075.
					38603	07/11/88	ND						
					38614	07/11/88	ND						
026	CEMENT WALL PANELS (3' X 8' WHITE)	MACM	116, 116A	480 SF	38585	07/11/88	45% CH	NO	UNDAMAGED	HIGH	5	O&M	
					38585	07/11/88	10% AM						
					38586	07/11/88	45% CH						
					38586	07/11/88	10% AM						
					38673	07/11/88	15% AM						
					38673	07/11/88	15% CH						
032	VINYL FLOOR TILE (10" X 10" BEIGE)	MACM	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	4,320 SF	38604	07/11/88	5% CH	NO	UNDAMAGED	LOW	5	O&M	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #047.
					38605	07/11/88	5% CH						
					38624	07/11/88	ND						
035	CEMENT WALL PANELS (GRAY, DEFLECTOR PANEL BOARD)	MACM	ROOF	90 SF	38611	07/11/88	65% CH	NO	UNDAMAGED	LOW	5	O&M	
					38612	07/11/88	20% CH						
					38613	07/11/88	20% CH						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**INSPECTION DATE: 9 - 14 JUL 2003**  
**BUILDING NUMBER: 0286 (Unknown)**

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
038	CEMENT WALL PANELS (4' X 8' WHITE)	MACM	110, 110A, 112	576 SF	38622	07/11/88	15% CH	NO	UNDAMAGED	HIGH	5	O&M	
					38623	07/11/88	15% CH						
046	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' ORANGE WITH RED STREAKS VINYL FLOOR TILE)	MACM	100, 105, 106	2,240 SF	0515-MAH-006A	05/15/90	5% CH	NO	UNDAMAGED	LOW	5	O&M	THIS IS THE ADHESIVE FOR MATERIAL #005.
					0515-MAH-006B	05/15/90	ND						
					0515-MAH-006C	05/15/90	ND						
047	FLOOR ADHESIVE (BLACK, UNDER 10" X 10" BEIGE VINYL FLOOR TILE)	MACM	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	4,320 SF	0515-MAH-012	05/15/90	3-5% CH	NO	UNDAMAGED	LOW	5	O&M	THIS IS THE ADHESIVE FOR MATERIAL #032.
084	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' WHITE WITH BLUE AND BLACK STREAKS VINYL FLOOR TILE)	MACM	216	836 SF	1196-MAH-084A	11/11/96	3-5% CH	NO	UNDAMAGED	LOW	5	O&M	THIS IS THE ADHESIVE FOR MATERIAL #023.
					1196-MAH-084B	11/11/96	3-5% CH						
					1196-MAH-084C	11/11/96	3-5% CH						
089	FLOOR ADHESIVE (BLACK, UNDER 9" X 9" GRAY VINYL FLOOR TILE)	MACM	CORRIDOR D, 109, 110, 110A, 110C, 113A, 116, 116A, 116B, 211	6,225 SF	1196-MAH-089A	11/11/96	3-5% CH	NO	DAMAGED / LOCALIZED	LOW	6	REPAIR  O&M	THIS IS THE ADHESIVE FOR MATERIAL #022. SIX SF OF THIS MATERIAL ARE EXPOSED AND NEED TO BE REPAIRED.
					1196-MAH-089B	11/11/96	3-5% CH						
					1196-MAH-089C	11/11/96	3-5% CH						
090	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' GRAY WITH BLACK STREAKS VINYL FLOOR TILE)	MACM	111, 111B, 111C	886 SF	1196-MAH-090A	11/11/96	3-5% CH	NO	UNDAMAGED	LOW	5	O&M	THIS IS THE ADHESIVE FOR MATERIAL #025.
					1196-MAH-090B	11/11/96	3-5% CH						
					1196-MAH-090C	11/11/96	3-5% CH						
091	FLOOR ADHESIVE (BLACK, UNDER 9" X 9" RED WITH WHITE AND BLACK STREAKS VINYL FLOOR TILE)	MACM	218A	80 SF	1196-MAH-091A	11/12/96	3-5% CH	NO	UNDAMAGED	LOW	5	O&M	THIS IS THE ADHESIVE FOR MATERIAL #037.
					1196-MAH-091B	11/12/96	3-5% CH						
					1196-MAH-091C	11/12/96	3-5% CH						

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**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
133	SHEET GASKET (2" - 6" DIAMETER, GRAY, ON PIPE FLANGE CONNECTIONS)	MACM	HEAT EXCHANGER AREA	35 EA	0703-MAH-133A	07/14/03	80% CH	NO	UNDAMAGED	LOW	5	O&M	
					0703-MAH-133B	07/14/03	50% CH						
					0703-MAH-133C	07/14/03	60% CH						
136	VINYL FLOOR TILE (10" X 10" WHITE WITH BLACK STREAKS)	MACM	STORAGE 5	700 SF	0703-MAH-136A	07/14/03	3% CH	NO	DAMAGED / LOCALIZED	HIGH	6	REPAIR  O&M	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #137. THREE SF OF THIS MATERIAL ARE DAMAGED AT THE DOORWAY AND NEED TO BE REPAIRED.
					0703-MAH-136B	07/14/03	3% CH						
					0703-MAH-136C	07/14/03	3% CH						
137	FLOOR ADHESIVE (BLACK, UNDER 10" X 10" WHITE WITH BLACK STREAKS VINYL FLOOR TILE)	MACM	STORAGE 5	700 SF	0703-MAH-137A	07/14/03	5% CH	NO	UNDAMAGED	LOW	5	O&M	THIS IS THE ADHESIVE FOR MATERIAL #136.
					0703-MAH-137B	07/14/03	5% CH						
					0703-MAH-137C	07/14/03	3% CH						

**MANNHEIM AMERICAN HIGH SCHOOL  
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**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
002	CEILING TILES (2' X 2' WHITE, FISSURED, SUSPENDED)	MACM	100, 105, 106, 200, 200A, 206, 206A, 207, 208, 208A, 209, 209A	24,200 SF	38536	10/01/88	ND						
					38599	10/01/88	ND						
					38616	10/01/88	ND						
003	WALLBOARD (WHITE)	MACM	100, 105, 106, 200, 208	600 SF	38538	10/01/88	ND						NO JOINT COMPOUND IS ASSOCIATED WITH THIS MATERIAL. THIS MATERIAL IS USED AS A CASING FOR THE EXHAUST DUCT.
					38554	10/01/88	ND						
009	VINYL FLOOR TILE (2' X 2' BLUE WITH MARBLE PATTERN)	MACM	200, 200A, 208, 208A, 209A	2,120 SF	38544	10/01/88	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #085.
					38550	10/01/88	ND						
011	VINYL FLOOR TILE (2' X 2' GREEN WITH BLACK AND WHITE STREAKS)	MACM	206, 206A	1,000 SF	38546	10/01/88	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #142.
					38547	10/01/88	ND						
012	VINYL FLOOR TILE (2' X 2' BROWN WITH BLACK AND WHITE STREAKS)	MACM	207, 209	1,960 SF	38548	10/01/88	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #086.
					38549	10/01/88	ND						
022	VINYL FLOOR TILE (9" X 9" GRAY)	MACM	CORRIDOR D, 109, 110, 110A, 110C, 113A, 116, 116A, 116B, 211	6,225 SF	38580	10/01/88	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #089.
					38581	10/01/88	ND						
					38615	10/01/88	ND						
023	VINYL FLOOR TILE (1' X 1' WHITE WITH BLUE AND BLACK STREAKS)	MACM	216	836 SF	38587	10/01/88	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #084.
					38588	10/01/88	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**INSPECTION DATE: 9 - 14 JUL 2003**  
**BUILDING NUMBER: 0286 (Unknown)**

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
024	VINYL FLOOR SHEETING (TAN, MARBLED)	MACM	110C, 112, 114, 210, 211, 213, 216A, 218, 218B, 219, 219A, 219B, 222	7,000 SF	38582	10/01/88	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #088.
					38591	10/01/88	ND						
					38617	10/01/88	ND						
025	VINYL FLOOR TILE (1' X 1' GRAY WITH BLACK STREAKS)	MACM	111, 111B, 111C	886 SF	38583	10/01/88	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #090.
					38584	10/01/88	ND						
031	WALL TILE (2' X 2' WHITE, PEGBOARD, STAPLED-ON)	MACM	130	8,000 SF	38600	10/01/88	ND						
					38601	10/01/88	ND						
					38602	10/01/88	ND						
					38625	10/01/88	ND						
034	VINYL FLOOR TILE (2' X 2' LIGHT BROWN WITH DARK BROWN AND WHITE STREAKS)	MACM	132 GYMNASIUM	2,400 SF	38609	10/01/88	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #077.
					38610	10/01/88	ND						
036	CEILING TILES (2' X 2' WHITE, FISSURED, SUSPENDED)	MACM	109, 110, 110A, 110B, 110C, 111, 111A, 111B, 111C, 112, 113A, 114A, 116, 116A, 121, 121A, 121B, 122, 210, 211, 212, 212A, 213, 213A, 213B, 214, 214A, 216, 216A, 216B, 218, 218A, 218B, 219, 219A, 219B, 222	16,440 SF	38618	10/01/88	ND						
					38619	10/01/88	ND						
037	VINYL FLOOR TILE (9" X 9" RED WITH WHITE AND BLACK STREAKS)	MACM	218A	80 SF	38620	10/01/88	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #091.
					38621	10/01/88	ND						
039	EXTERIOR SIDING (WHITE)	MACM	EXTERIOR OF BUILDING	2,000 SF	38626	10/01/88	ND						
					38627	10/01/88	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

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HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
042	ASPHALTIC ROOFING MATERIALS (BLACK, TAR PAPER)	MACM	ROOF	40,000 SF	38678	10/01/88	ND						
					38679	10/01/88	ND						
043	EXTERIOR PLASTERS (GRAY, CEMENTITIOUS)	SACM	EXTERIOR OF BUILDING	133,000 SF	38680	10/01/88	ND						
					38681	10/01/88	ND						
					38682	10/01/88	ND						
044	WALL AND CEILING PLASTER (WHITE)	SACM	ART SUPPLY ROOM 1, ART SUPPLY ROOM 2, CONCESSION STORAGE, COPY ROOM, CORRIDOR A, CORRIDOR B, CORRIDOR D, CORRIDOR E, ENTRY 1, HVAC 1, HVAC 2, J1, J2, J3, LAN ROOM, READING ROOM, STAGE, STAIRWELL 1, STAIRWELL A, STAIRWELL B, STAIRWELL C, STORAGE ROOM 4, SUPPLY OFFICE, T2, T3, T4, T5, T6, TRANSFORMER ROOM, 109, 110, 110B, 111, 111A, 111B, 111C, 112, 114, 114A, 114B, 116, 116A, 116B, 117, 118, 118A, 118B, 118C, 119, 120, 121A, 121B, 122, 125, 126, 127, 128, 129, 130, 130A, 130B, 131, 131A, 131B, 132 GYMNASIUM, 132A, 132B, 132C, 132D, 210, 211, 212, 212A, 213, 213A, 213B, 214, 214A, 216, 216A, 216B, 218, 218A, 218B, 219, 219A, 219B, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229	42,800 SF	0515-MAH-007A	05/15/90	<1% CH						*SAMPLES WERE REANALYZED USING SEM TECHNIQUES. THE RESULTS OF THE ANALYTICAL TESTS WERE LESS THAN 1% ASBESTOS. THIS MATERIAL IS NOT CONSIDERED TO BE ACM.
					0515-MAH-007A	05/15/90	ND*						
					0515-MAH-007B	05/15/90	ND						
					0515-MAH-007B	05/15/90	ND*						
					0515-MAH-007C	05/15/90	ND						
					0515-MAH-007C	05/15/90	ND*						
					0510-MAH-044A	05/10/91	ND						
					0510-MAH-044B	05/10/91	ND						
					0510-MAH-044C	05/10/91	ND						
					0510-MAH-044D	05/10/91	ND						
					0510-MAH-044E	05/10/91	ND						
					0510-MAH-044F	05/10/91	ND						
					0510-MAH-044G	05/10/91	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
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HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
045	WALL PLASTER (1/8" THICK, WHITE, ON CONCRETE)	SACM	CORRIDOR C, CORRIDOR F, HC, INFORMATION CENTER, J4, STAIRWELL D, STORAGE ROOM 1, T1, V1, 100, 101, 102, 103, 104, 105, 109, 109A, 200, 200A, 203, 204, 206, 206A, 207, 208, 208A, 209, 209A	33,220 SF	0515-MAH-005A	05/15/90	ND						*SAMPLES WERE REANALYZED USING SEM TECHNIQUES. THE RESULTS OF THE ANALYTICAL TESTS WERE LESS THAN 1% ASBESTOS. THIS MATERIAL IS NOT CONSIDERED TO BE ACM.
					0515-MAH-005A	05/15/90	ND*						
					0515-MAH-005B	05/15/90	<1% CH						
					0515-MAH-005B	05/15/90	ND*						
					0515-MAH-005C	05/15/90	ND						
					0515-MAH-005C	05/15/90	ND*						
					0510-MAH-045A	05/10/91	ND						
					0510-MAH-045B	05/10/91	ND						
					0510-MAH-045C	05/10/91	ND						
					0510-MAH-045D	05/10/91	1-2% CH						
					0510-MAH-045D	05/10/91	ND*						
					0510-MAH-045E	05/10/91	<1% CH						
					0510-MAH-045E	05/10/91	ND*						
					0510-MAH-045F	05/10/91	ND						
					0510-MAH-045G	05/10/91	ND						
062	VINYL FLOOR SHEETING (YELLOW, RAISED DOT)	MACM	ART SUPPLY ROOM 1, COPY ROOM, STAIRWELL 1, STORAGE ROOM 1, STORAGE ROOM 2, STORAGE ROOM 3, STORAGE ROOM 4, V1	12,360 SF	0194-MAH-062A	01/20/94	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #063.
					0194-MAH-062B	01/20/94	ND						
					0194-MAH-062C	01/20/94	ND						
063	FLOOR ADHESIVE (TAN, UNDER YELLOW, RAISED DOT VINYL FLOOR SHEETING)	MACM	ART SUPPLY ROOM 1, COPY ROOM, STAIRWELL 1, STORAGE ROOM 1, STORAGE ROOM 2, STORAGE ROOM 3, STORAGE ROOM 4, V1	12,360 SF	0194-MAH-063A	01/20/94	ND						THIS IS THE ADHESIVE FOR MATERIAL #062.
					0194-MAH-063B	01/20/94	ND						
					0194-MAH-063C	01/20/94	ND						
064	FLOOR ADHESIVE (TAN, UNDER BROWN CARPET)	MACM	SUPPLY OFFICE	750 SF	0194-MAH-064A	01/20/94	ND						
					0194-MAH-064B	01/20/94	ND						
					0194-MAH-064C	01/20/94	ND						
065	CEILING TILES (2' X 2' WHITE, FISSURED, SUSPENDED)	MACM	COPY ROOM, HEAT EXCHANGER AREA, SUPPLY ROOM, 116, 116A, 117	1,200 SF	0194-MAH-065A	01/20/94	ND						
					0194-MAH-065B	01/20/94	ND						
					0194-MAH-065C	01/20/94	ND						



**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**INSPECTION DATE: 9 - 14 JUL 2003**  
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HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
071	ASPHALTIC ROOFING MATERIALS (BLACK, ROOF FELT)	MACM	ROOF, 132A	800 SF	0515-MAH-001	05/29/90	ND						
072	EXTERIOR PLASTERS (WHITE, STUCCO)	SACM	EXTERIOR OF BUILDING	8,900 SF	0515-MAH-002	05/29/90	ND						
073	EXTERIOR PLASTERS (WHITE, STUCCO)	SACM	132 GYMNASIUM	4,000 SF	0515-MAH-003A	05/29/90	ND						
					0515-MAH-003B	05/29/90	ND						
					0515-MAH-003C	05/29/90	ND						
074	EXTERIOR PLASTERS (WHITE, STUCCO)	SACM	EXTERIOR OF BUILDING	6,500 SF	0515-MAH-004	05/29/90	ND						
075	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' BEIGE VINYL FLOOR TILE)	MACM	102, 212A, 214A	312 SF	0515-MAH-008A	05/29/90	ND						THIS IS THE ADHESIVE FOR MATERIAL #007.
					0515-MAH-008B	05/29/90	ND						
					0515-MAH-008C	05/29/90	ND						
077	FLOOR ADHESIVE (TAN, UNDER 2' X 2' LIGHT BROWN WITH DARK BROWN AND WHITE STREAKS VINYL FLOOR TILE)	MACM	132 GYMNASIUM	2,400 SF	0515-MAH-010	05/30/90	ND						THIS IS THE ADHESIVE FOR MATERIAL #034.
079	FLOOR ADHESIVE (YELLOW, UNDER YELLOW RAISED DOT RUBBER FLOORING)	MACM	CORRIDOR B, CORRIDOR C, CORRIDOR E, CORRIDOR F, STAIRWELL D, 2ND FLOOR WALKWAY, 132B	660 SF	0515-MAH-015	05/30/90	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**INSPECTION DATE: 9 - 14 JUL 2003**  
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HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
085	FLOOR ADHESIVE (YELLOW, UNDER 2' X 2' BLUE WITH MARBLE PATTERN VINYL FLOOR TILE)	MACM	200, 200A, 208, 208A, 209A	2,120 SF	1196-MAH-085A	11/11/96	ND						THIS IS THE ADHESIVE FOR MATERIAL #009.
					1196-MAH-085B	11/11/96	ND						
					1196-MAH-085C	11/11/96	ND						
086	FLOOR ADHESIVE (YELLOW, UNDER 2' X 2' BROWN WITH BLACK AND WHITE STREAKS VINYL FLOOR TILE)	MACM	207, 209	1,960 SF	1196-MAH-086A	11/11/96	ND						THIS IS THE ADHESIVE FOR MATERIAL #012.
					1196-MAH-086B	11/11/96	ND						
					1196-MAH-086C	11/11/96	ND						
087	CEILING TILES (2' X 2' WHITE, PEGBOARD, RANDOM PATTERN, SUSPENDEd)	MACM	126, 127, 128, 129, 130, 130A, 130B, 223, 224, 225, 226, 227	9,250 SF	1196-MAH-087A	11/11/96	ND						
					1196-MAH-087B	11/11/96	ND						
					1196-MAH-087C	11/11/96	ND						
088	FLOOR ADHESIVE (BLACK, UNDER TAN MARBLED VINYL FLOOR SHEETING)	MACM	110C, 112, 114, 210, 211, 213, 216A, 218, 218B, 219, 219A, 219B, 222	7,000 SF	1196-MAH-088A	11/11/96	ND						THIS IS THE ADHESIVE FOR MATERIAL #024.
					1196-MAH-088B	11/11/96	ND						
					1196-MAH-088C	11/11/96	ND						
109	THERMAL PIPE INSULATION (6" DIAMETER, BLACK PAPER COVER, FIBERGLASS CORE)	TSIACM	PIPE CHASE	150 LF	0301-MAH-109A	03/19/01	ND						
					0301-MAH-109B	03/19/01	ND						
					0301-MAH-109C	03/19/01	ND						
110	SINK COATING (BLACK)	MACM	105, 117, 118	12 EA	0301-MAH-110A	03/19/01	ND						
					0301-MAH-110B	03/19/01	ND						
					0301-MAH-110C	03/19/01	ND						
111	FLOOR ADHESIVE (TAN, UNDER GRAY RAISED DOT RUBBER FLOORING)	MACM	ELEVATOR, STAIRWELL A, STAIRWELL B	308 SF	0301-MAH-111A	03/19/01	ND						
					0301-MAH-111B	03/19/01	ND						
					0301-MAH-111C	03/19/01	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
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					NUMBER	DATE	RESULT						
112	FLOOR ADHESIVE (TAN, UNDER GRAY WITH PURPLE, BLACK, AND WHITE DOT RUBBER FLOORING)	MACM	CORRIDOR A, CORRIDOR D, CORRIDOR E, ENTRY 1, LAN ROOM, STAIRWELL A, STAIRWELL B, STAIRWELL C, 114A, 116, 121, 210, 214	5,300 SF	0301-MAH-112A	03/19/01	ND						
					0301-MAH-112B	03/19/01	ND						
					0301-MAH-112C	03/19/01	ND						
113	FLOOR ADHESIVE (YELLOW, UNDER GRAY STREAKED RUBBER SHEETING)	MACM	STAGE	450 SF	0301-MAH-113A	03/19/01	ND						
					0301-MAH-113B	03/19/01	ND						
					0301-MAH-113C	03/19/01	ND						
114	CEILING BOARD (WHITE)	MACM	2ND FLOOR WALKWAY	300 SF	0301-MAH-114A	03/19/01	ND						THE JOINT COMPOUND FOR THIS MATERIAL IS MATERIAL #115.
					0301-MAH-114B	03/19/01	ND						
					0301-MAH-114C	03/19/01	ND						
115	JOINT COMPOUND (WHITE)	MACM	2ND FLOOR WALKWAY	30 SF	0301-MAH-115A	03/19/01	ND						THIS IS THE JOINT COMPOUND FOR MATERIAL #114.
					0301-MAH-115B	03/19/01	ND						
					0301-MAH-115C	03/19/01	ND						
116	WALLBOARD (1/2" THICK, TAN PAPER, WHITE CORE, SMOOTH SURFACE)	MACM	CORRIDOR C, STORAGE ROOM 3, 110B, 117, 117A, 118, 118B, 121, 121A, 121B	40 SF	0301-MAH-116A	03/19/01	ND						THE JOINT COMPOUND FOR THIS MATERIAL IS MATERIAL #117. THIS MATERIAL IS USED TO ENCLOSE THE PIPE CHASE ALONG THE TOP OF THE WALL.
					0301-MAH-116B	03/19/01	ND						
					0301-MAH-116C	03/19/01	ND						
117	JOINT COMPOUND (WHITE)	MACM	CORRIDOR C, STORAGE ROOM 3, 110B, 117, 117A, 118, 118B, 121, 121A, 121B	4 SF	0301-MAH-117A	03/19/01	ND						THIS IS THE JOINT COMPOUND FOR MATERIAL #116.
					0301-MAH-117B	03/19/01	ND						
					0301-MAH-117C	03/19/01	ND						
118	WALLBOARD (WHITE)	MACM	116, 116B	600 SF	0301-MAH-118A	03/19/01	ND						THE JOINT COMPOUND FOR THIS MATERIAL IS MATERIAL #119.
					0301-MAH-118B	03/19/01	ND						
					0301-MAH-118C	03/19/01	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

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					NUMBER	DATE	RESULT						
119	JOINT COMPOUND (WHITE)	MACM	116, 116B	60 SF	0301-MAH-119A	03/19/01	ND						THIS IS THE JOINT COMPOUND FOR MATERIAL #118.
					0301-MAH-119B	03/19/01	ND						
					0301-MAH-119C	03/19/01	ND						
120	FLOOR ADHESIVE (TAN, UNDER DARK GRAY CARPET WITH MULTICOLORED SPECKS)	MACM	100, 105, 106, 109, 109A, 110, 110A, 110B, 111, 111A, 111B, 111C, 112, 113A, 114A, 114B, 121, 121A, 121B, 122, 126, 127, 128, 129, 130, 130A, 130B, 212, 213, 213A, 213B, 214, 216, 216A, 218, 218A, 218B, 219, 219A, 219B, 222, 223, 224, 225, 226, 227	20,009 SF	0301-MAH-120A	03/19/01	ND						
					0301-MAH-120B	03/19/01	ND						
					0301-MAH-120C	03/19/01	ND						
121	CEMENT FLOORING (GRAY LEVELING COMPOUND)	MACM	CORRIDOR D, 100, 105, 106, 109, 110, 110A, 110B, 110C, 111, 111A, 111B, 111C, 112, 113A, 114A, 114B, 121, 121A, 121B, 122, 126, 127, 128, 129, 130, 130A, 130B, 210, 211, 212, 213, 213A, 213B, 214, 216, 216A, 218, 218A, 218B, 219, 219A, 219B, 222, 223, 224, 225, 226, 227	22,340 SF	0301-MAH-121A	03/19/01	ND						
					0301-MAH-121B	03/19/01	ND						
					0301-MAH-121C	03/19/01	ND						
123	FLOOR ADHESIVE (TAN, UNDER BROWN CARPET)	MACM	INFORMATION CENTER, READING ROOM, 211	4,200 SF	0301-MAH-123A	03/19/01	ND						
					0301-MAH-123B	03/19/01	ND						
					0301-MAH-123C	03/19/01	ND						
124	WALLBOARD (WHITE)	MACM	114	50 SF	0301-MAH-124A	03/19/01	ND						THE JOINT COMPOUND FOR THIS MATERIAL IS MATERIAL #125.
					0301-MAH-124B	03/19/01	ND						
					0301-MAH-124C	03/19/01	ND						
125	JOINT COMPOUND (WHITE)	MACM	114	5 SF	0301-MAH-125A	03/19/01	ND						THIS IS THE JOINT COMPOUND FOR MATERIAL #124.
					0301-MAH-125B	03/19/01	ND						
					0301-MAH-125C	03/19/01	ND						
126	CEILING TILES (2' X 2' WHITE, SMOOTH, SUSPENDED)	MACM	INFORMATION CENTER, READING ROOM, 109A, 114, 118, 118B, 118C	6,353 SF	0301-MAH-126A	03/19/01	ND						
					0301-MAH-126B	03/19/01	ND						
					0301-MAH-126C	03/19/01	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

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					NUMBER	DATE	RESULT						
134	SHEET GASKET (2" - 6" DIAMETER, GREEN, ON PIPE FLANGE CONNECTIONS)	MACM	HEAT EXCHANGER AREA	10 EA	0703-MAH-134A	07/14/03	ND						
					0703-MAH-134B	07/14/03	ND						
					0703-MAH-134C	07/14/03	ND						
135	FLOOR ADHESIVE (BLACK, UNDER YELLOW RUBBER FLOOR SHEETING)	MACM	110B	56 SF	0703-MAH-135A	07/14/03	ND						
					0703-MAH-135B	07/14/03	ND						
					0703-MAH-135C	07/14/03	ND						
138	WALLBOARD (1/2" THICK, GRAY PAPER, SMOOTH SURFACE, WHITE CORE)	MACM	STAIRWELL C, 114A, 130, 130A, 130B	1,360 SF	0703-MAH-138A	07/14/03	ND						THE JOINT COMPOUND FOR THIS MATERIAL IS MATERIAL #139.
					0703-MAH-138B	07/14/03	ND						
					0703-MAH-138C	07/14/03	ND						
139	JOINT COMPOUND (WHITE)	MACM	STAIRWELL C, 114A, 130, 130A, 130B	136 SF	0703-MAH-139A	07/14/03	ND						THIS IS THE JOINT COMPOUND FOR MATERIAL #138.
					0703-MAH-139B	07/14/03	ND						
					0703-MAH-139C	07/14/03	ND						
140	FLOOR ADHESIVE (CREAM, UNDER 2' X 2' WHITE WITH VIOLET AND BLACK SPECKS RUBBER SQUARES)	MACM	105	300 SF	0703-MAH-140A	07/14/03	ND						
					0703-MAH-140B	07/14/03	ND						
					0703-MAH-140C	07/14/03	ND						
141	CEILING TILES (2' X 2' WHITE, PEGBOARD, STRAIGHT PATTERN, SUSPENDED)	MACM	130, 130A, 130B	28 SF	0703-MAH-141A	07/14/03	ND						
					0703-MAH-141B	07/14/03	ND						
					0703-MAH-141C	07/14/03	ND						
142	FLOOR ADHESIVE (TAN, UNDER 2' X 2' GREEN WITH BLACK AND WHITE STREAKS VINYL FLOOR TILE)	MACM	206, 206A	1,000 SF	0703-MAH-142A	07/14/03	ND						THIS IS THE ADHESIVE FOR MATERIAL #011.
					0703-MAH-142B	07/14/03	ND						
					0703-MAH-142C	07/14/03	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0286 (Unknown)

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					NUMBER	DATE	RESULT						
143	VINYL FLOOR SHEETING (VIOLET WITH BLUE STREAKS)	MACM	299 ATRIUM	1,024 SF	0703-MAH-143A	07/14/03	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #145.
					0703-MAH-143B	07/14/03	ND						
					0703-MAH-143C	07/14/03	ND						
144	VINYL FLOOR SHEETING (TAN WITH BLACK STREAKS)	MACM	299 ATRIUM	256 SF	0703-MAH-144A	07/14/03	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #145.
					0703-MAH-144B	07/14/03	ND						
					0703-MAH-144C	07/14/03	ND						
145	FLOOR ADHESIVE (TAN, UNDER VIOLET WITH BLUE STREAKS AND TAN WITH BLACK STREAKS VINYL FLOOR SHEETINGS)	MACM	299 ATRIUM	1,280 SF	0703-MAH-145A	07/14/03	ND						THIS IS THE ADHESIVE FOR MATERIALS #143 AND #144.
					0703-MAH-145B	07/14/03	ND						
					0703-MAH-145C	07/14/03	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**INSPECTION DATE: 9 - 14 JUL 2003**  
**BUILDING NUMBER: 0286 (Unknown)**

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
001	WINDOWSILLS (GRAY, CEMENTITIOUS)	MACM	209	425 SF	38535	07/11/88	20% CH						AT THE TIME OF THE 2000 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38551	07/11/88	20% CH						
017	WALLBOARD (5' X 8' TAN, CEMENTITIOUS PANELS)	MACM	SUPPLY OFFICE, 122	0 SF	38561	07/11/88	20% CH						AT THE TIME OF THE 1994 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38562	07/11/88	20% CH						
					38596	07/11/88	5% CH						
019	CEMENT PIPE (CEMENTITIOUS AIR DUCT SYSTEM)	MACM	STORAGE ROOM 3	0 SF	38574	07/11/88	20% CH						AT THE TIME OF THE 1994 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38575	07/11/88	20% CH						
020	ASPHALTIC ROOFING MATERIALS (3' X 4' CORRUGATED CEMENT PANEL, IN STORAGE)	MACM	STORAGE ROOM 1	12 SF	38572	07/11/88	20% CH						AT THE TIME OF THE 1994 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38573	07/11/88	20% CH						
021	FIRE DOOR LINING (PAPER LINING ENCASED IN METAL ACCESS DOOR)	MACM	SUPPLY OFFICE	7 SF	38576	07/11/88	45% CH						AT THE TIME OF THE 1994 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38577	07/11/88	45% CH						
027	ELECTRICAL WIRE INSULATION (TEMPERATURE PROBE WIRES, WRAPPED WITH TAPE)	MACM	118C	5 LF	38589	07/11/88	70% CH						AT THE TIME OF THE 1994 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38590	07/11/88	70% CH						
028	HEAT SHIELDS (3' X 3' CEMENT PANEL)	MACM	118C	0 SF	38592	07/11/88	20% CH						AT THE TIME OF THE 1994 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38593	07/11/88	20% CH						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**INSPECTION DATE: 9 - 14 JUL 2003**  
**BUILDING NUMBER: 0286 (Unknown)**

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
029	HEAT SHIELDS (3' X 3' WHITE FIBER)	MACM	118C	0 SF	38594	07/11/88	45% CH						AT THE TIME OF THE 1994 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38594	07/11/88	10% AM						
					38595	07/11/88	45% CH						
033	CEMENT WALL PANELS (4' X 6' PANELS)	MACM	132B	250 SF	38607	07/11/88	20% CH						AT THE TIME OF THE 2000 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38608	07/11/88	20% CH						
048	CEMENT WALL PANELS (4' X 8')	MACM	2ND FLOOR WALKWAY	0 SF	0515-MAH-017	05/15/90	15% CH						256 SF OF THIS MATERIAL WERE REMOVED IN JULY 1994.
049	VINYL FLOOR TILE (10" X 10" GRAY)	MACM	STAGE	0 SF	0515-MAH-013	05/15/90	10-15% CH						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #050. 510 SF OF THIS MATERIAL WERE REMOVED IN JULY 1994.
050	FLOOR ADHESIVE (UNDER 10" X 10" GRAY VINYL FLOOR TILE)	MACM	STAGE	0 SF	0515-MAH-011	05/15/90	1-3% CH						THIS IS THE ADHESIVE FOR MATERIAL #049. 510 SF OF THIS MATERIAL WERE REMOVED IN JULY 1994.
057	THERMAL TAPE (USED AT BRACKET JOINT ON PIPING)	MACM	HEAT EXCHANGER AREA	0 EA	0510-MAH-057A	05/10/91	50% CH						AT THE TIME OF THE 1994 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					0510-MAH-057B	05/10/91	50-70% CH						
					0510-MAH-057C	05/10/91	50% CH						
058	SAFE, CABINET, DESK INSULATION (MEILINK)	MACM	110C	0 EA	ASSUMED ACM	05/10/91							AT THE TIME OF THE 1994 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.



**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0286 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
060	LAB OVEN INSULATION (CEMENT BOARD)	MACM	209A	0 EA	0510-MAH-060A	05/10/91	60% CH						AT THE TIME OF THE 1994 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					0510-MAH-060B	05/10/91	40% CH						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**INSPECTION DATE: 9 - 14 JUL 2003**  
**BUILDING NUMBER: 0286 (Unknown)**

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						

**THE FOLLOWING MATERIALS COULD NOT BE LOCATED IN BUILDING 0286 (Unknown)**

008	CEMENT WALL PANELS (GRAY)	MACM	100, 106, 109, 110, 116, 117, 131, 207, 208A, 212A, 219	180,000 SF	38543	10/01/88	ND						AT THE TIME OF THE 2003 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38579	10/01/88	ND						
010	SINK COATING (CEMENT-LIKE)	MACM	200A, 207	100 SF	38545	10/01/88	ND						AT THE TIME OF THE 2000 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38552	10/01/88	ND						
013	THERMAL PIPE INSULATION (WHITE PLASTER COVER, PAPER, MINERAL WOOL CORE)	TSIACM	STAIRWELL A	1,220 LF	38565	10/01/88	ND						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38566	10/01/88	ND						
					38567	10/01/88	ND						
					38569	10/01/88	ND						
					38570	10/01/88	ND						
014	VINYL FLOOR TILE (9" X 9" RED WITH WHITE STREAKS)	MACM	STORAGE ROOM 2	40 SF	38557	10/01/88	ND						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38558	10/01/88	ND						
015	CEILING TILES (1' X 1' WHITE, FISSURED)	MACM	STORAGE ROOM 2	50 SF	38563	10/01/88	ND						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38564	10/01/88	ND						
016	VINYL FLOOR TILE (1' X 1' BLACK)	MACM	STORAGE ROOM 2	20 SF	38555	10/01/88	ND						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38556	10/01/88	ND						
018	VINYL FLOOR TILE (9" X 9" GRAY)	MACM	STORAGE ROOM 2	12 SF	38559	10/01/88	ND						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38560	10/01/88	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0286 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
030	WALLBOARD (WHITE SURFACE, WHITE CORE)	MACM	122	500 SF	38597	10/01/88	ND						AT THE TIME OF THE 2000 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38598	10/01/88	ND						
040	FIRE BLANKETS (GYM MAT-SUPPORT)	MACM	132 GYMNASIUM	320 LF	38674	10/01/88	ND						AT THE TIME OF THE 2000 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38675	10/01/88	ND						
041	CEILING PLASTER (WHITE)	SACM	CORRIDOR A, CORRIDOR D, CORRIDOR E, J1, J2, J3, T2, T4, 109, 110, 111, 111B, 111C, 112, 114A, 116, 116A, 116B, 117, 118, 118A, 118B, 119, 120, 121A, 121B, 122, 125, 126, 127, 128, 129, 130, 131, 132C, 132D, 210, 211, 212, 212A, 213, 213A, 213B, 214, 214A, 216, 216A, 216B, 218, 218A, 218B, 219, 219A, 219B, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229	32,000 SF	38676	10/01/88	ND						AT THE TIME OF THE 2003 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38677	10/01/88	ND						
059	ELECTRICAL WIRE INSULATION (ASPHALTIC COATED CLOTH WIRE, USED AS CONDUIT WRAP)	MACM	COPY ROOM	50 LF	0510-MAH-059A	05/10/91	ND						AT THE TIME OF THE 1994 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					0510-MAH-059B	05/10/91	ND						
					0510-MAH-059C	05/10/91	ND						
083	BURNER PAD	MACM	206	15 EA	0515-MAH-016	05/30/90	ND						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0286C (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
094	WALLBOARD (WHITE)	MACM	C3, C4, C5, C6, CORRIDOR A, RIFLE RANGE, STORAGE 1	6,200 SF	1196-MAH-094A	11/13/96	ND						THE JOINT COMPOUND FOR THIS MATERIAL IS MATERIAL #099.
					1196-MAH-094B	11/13/96	ND						
					1196-MAH-094C	11/13/96	ND						
095	CEILING TILES (2' X 2' WHITE, PINHOLE, SUSPENDED)	MACM	C3, C4, C5, C6, CORRIDOR A, M1, RIFLE RANGE, STORAGE 1, W1	3,936 SF	1196-MAH-095A	11/13/96	ND						
					1196-MAH-095B	11/13/96	ND						
					1196-MAH-095C	11/13/96	ND						
096	VINYL FLOOR SHEETING (LIGHT BLUE WITH BLACK STREAKS)	MACM	C3, C4, C5, CORRIDOR A, STORAGE 1	1,400 SF	1196-MAH-096A	11/13/96	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #100.
					1196-MAH-096B	11/13/96	ND						
					1196-MAH-096C	11/13/96	ND						
098	FLOOR ADHESIVE (YELLOW, UNDER BROWN AND CHARCOAL CARPETS)	MACM	C6, RIFLE RANGE	1,400 SF	0301-MAH-098A	03/15/01	ND						
					0301-MAH-098B	03/15/01	ND						
					0301-MAH-098C	03/15/01	ND						
099	JOINT COMPOUND (WHITE)	MACM	C3, C4, C5, C6, CORRIDOR A, RIFLE RANGE, STORAGE 1	620 SF	0301-MAH-099A	03/15/01	ND						THIS IS THE JOINT COMPOUND FOR MATERIAL #094.
					0301-MAH-099B	03/15/01	ND						
					0301-MAH-099C	03/15/01	ND						
100	FLOOR ADHESIVE (GRAY, UNDER LIGHT BLUE WITH BLACK STREAKS VINYL FLOOR SHEETING)	MACM	C3, C4, C5, CORRIDOR A, STORAGE 1	1,400 SF	0301-MAH-100A	03/15/01	ND						THIS IS THE ADHESIVE FOR MATERIAL #096.
					0301-MAH-100B	03/15/01	ND						
					0301-MAH-100C	03/15/01	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0736 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						

THE FOLLOWING ASBESTOS MATERIALS WERE IDENTIFIED IN BUILDING 0736 (Unknown)

055	SHEET GASKET (2" - 6" DIAMETER, BLACK, ON PIPE FLANGE CONNECTIONS)	MACM	BALCONY 2, BOILER ROOM	54 EA	0510-MAH-055	05/10/91	60% CH	NO	UNDAMAGED	LOW	5	O&M	
130	SHEET GASKET (2" - 6" DIAMETER, RED, ON PIPE FLANGE CONNECTIONS)	MACM	BOILER ROOM	14 EA	0703-MAH-130A	07/13/03	70% CH	NO	UNDAMAGED	LOW	5	O&M	
					0703-MAH-130B	07/13/03	70% CH						
					0703-MAH-130C	07/13/03	70% CH						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0736 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
001	CEILING TILES (2' X 2' WHITE, PINHOLE, SUSPENDED)	MACM	COACH OFFICE, HANDBALL COURT 2	450 SF	38530	10/01/88	ND						
					38531	10/01/88	ND						
067	VINYL FLOOR TILE (1' X 1' GRAY)	MACM	COACH OFFICE	300 SF	0194-MAH-067A	01/25/94	ND						THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #068.
					0194-MAH-067B	01/25/94	ND						
					0194-MAH-067C	01/25/94	ND						
068	FLOOR ADHESIVE (YELLOW, UNDER 1' X 1' GRAY VINYL FLOOR TILE)	MACM	COACH OFFICE	300 SF	0194-MAH-068A	01/25/94	ND						THIS IS THE ADHESIVE FOR MATERIAL #067.
					0194-MAH-068B	01/25/94	ND						
					0194-MAH-068C	01/25/94	ND						
069	WALL AND CEILING PLASTER (BROWN/GRAY)	SACM	ATHLETIC OFFICE, BALCONY 1, COACH OFFICE, SHOWER 1, SHOWER 2, SPORTS ARENA, STAIRWELL 1, STAIRWELL 2, STAIRWELL 3, TICKET OFFICE, WEIGHT ROOM	10,000 SF	0194-MAH-069A	01/25/94	ND						
					0194-MAH-069B	01/25/94	ND						
					0194-MAH-069C	01/25/94	ND						
					0194-MAH-069D	01/25/94	ND						
					0194-MAH-069E	01/25/94	ND						
					0301-MAH-069F	03/19/01	ND						
122	FLOOR ADHESIVE (GRAY, UNDER LIGHT BLUE RUBBER FLOORING)	MACM	LOBBY	2,700 SF	0301-MAH-122A	03/19/01	ND						
					0301-MAH-122B	03/19/01	ND						
					0301-MAH-122C	03/19/01	ND						
127	CEILING BOARD (1/2" THICK, GRAY PAPER, SMOOTH SURFACE, WHITE CORE)	MACM	V1	110 SF	0703-MAH-127A	07/13/03	ND						THE JOINT COMPOUND FOR THIS MATERIAL IS MATERIAL #128.
					0703-MAH-127B	07/13/03	ND						
					0703-MAH-127C	07/13/03	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0736 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
128	JOINT COMPOUND (WHITE)	MACM	V1	11 SF	0703-MAH-128A	07/13/03	ND						THIS IS THE JOINT COMPOUND FOR MATERIAL #127.
					0703-MAH-128B	07/13/03	ND						
					0703-MAH-128C	07/13/03	ND						
129	SHEET GASKET (2" - 6" DIAMETER, GREEN, ON PIPE FLANGE CONNECTIONS)	MACM	BOILER ROOM	14 EA	0703-MAH-129A	07/13/03	ND						
					0703-MAH-129B	07/13/03	ND						
					0703-MAH-129C	07/13/03	ND						
131	THERMAL PIPE INSULATION (6" & 10" DIAMETER, BLACK, ASPHALTIC WRAP)	TSIACM	BOILER ROOM	60 LF	0703-MAH-131A	07/13/03	ND						THIS MATERIAL IS LOCATED IN CRAWL SPACES NEXT TO THE STAIRS AND UNDER THE BUILDING.
					0703-MAH-131B	07/13/03	ND						
					0703-MAH-131C	07/13/03	ND						
132	THERMAL PIPE INSULATION (10" DIAMETER, WHITE)	TSIACM	BOILER ROOM	45 LF	0703-MAH-132A	07/13/03	ND						THIS MATERIAL IS LOCATED IN THE CRAWL SPACE THAT RUNS UNDER THE BUILDING ON 10" PIPE AND IS ABANDONED IN PLACE.
					0703-MAH-132B	07/13/03	ND						
					0703-MAH-132C	07/13/03	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0736 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						

THE FOLLOWING MATERIALS COULD NOT BE LOCATED IN BUILDING 0736 (Unknown)

003	CEMENT WALL PANELS (VARIOUS SIZES)	MACM	EXTERIOR OF BUILDING	2,000 SF	ASSUMED ACM	07/11/88							AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					0510-MAH-003A	05/10/91	40% CH						
					0510-MAH-003B	05/10/91	25-40% CH						
					0510-MAH-003C	05/10/91	40% CH						
054	CEMENT ROOFING PANELS (CORRUGATED)	MACM	HANDBALL COURT 2	80 SF	0510-MAH-054A	05/10/91	40% CH						AT THE TIME OF THE 2000 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					0510-MAH-054B	05/10/91	40% CH						
					0510-MAH-054C	05/10/91	40% CH						



**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0736 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						

THE FOLLOWING MATERIALS COULD NOT BE LOCATED IN BUILDING 0736 (Unknown)

002	THERMAL PIPE INSULATION (WHITE PLASTER COVER, PAPER, MINERAL WOOL CORE)	TSIACM	SPORTS ARENA	815 SF	38532	10/01/88	ND						AT THE TIME OF THE 2000 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38533	10/01/88	ND						
					38534	10/01/88	ND						
066	CAULK (WHITE/GREEN)	MACM	LOBBY, SPORTS ARENA	4,068 LF	0194-MAH-066A	01/25/94	ND						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					0194-MAH-066B	01/25/94	ND						
					0194-MAH-066C	01/25/94	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0746 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
003	VINYL FLOOR TILE (9" X 9" BLUE)	MACM	B4, B4A, B5	3,575 SF	38630	07/11/88	5% CH	NO	DAMAGED / LOCALIZED	HIGH	6	REPAIR  O&M	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #080. 13 SF OF THIS MATERIAL ARE DAMAGED AND NEED TO BE REPAIRED IN ROOMS B4 AND B5.
					38631	07/11/88	5% CH						
					38639	07/11/88	5% CH						
008	VINYL FLOOR TILE (9" X 9" BLACK WITH WHITE STREAKS)	MACM	DARKROOM	75 SF	38640	07/11/88	5% CH	NO	DAMAGED / DISTRIBUTED	HIGH	6	REPAIR  O&M	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #070. SIX SF OF THIS MATERIAL ARE DAMAGED AND NEED TO BE REPAIRED.
					38641	07/11/88	5% CH						
053	FIRE DOOR LINING (WHITE, ENCLOSED IN METAL)	MACM	B4	5 EA	0516-MAH-020	05/16/90	80% CH	NO	UNDAMAGED	LOW	5	O&M	THERE ARE 3 SINGLE DOORS AND 1 DOUBLE DOOR (2 EACH).
055	CEMENT WALL PANELS (BLACK CEMENT)	MACM	B5	1,550 SF	38634	07/11/88	10% CH	NO	UNDAMAGED	HIGH	5	O&M	
					38638	07/11/88	10% CH						
070	FLOOR ADHESIVE (YELLOW, UNDER 9" X 9" BLACK WITH WHITE STREAKS VINYL FLOOR TILE)	MACM	DARKROOM	75 SF	0294-MAH-070A	02/22/94	5-7% CH	NO	UNDAMAGED	LOW	5	O&M	THIS IS THE ADHESIVE FOR MATERIAL #008.
					0294-MAH-070B	02/22/94	5-7% CH						
					0294-MAH-070C	02/22/94	5-7% CH						
148	CAULK (GRAY)	MACM	B4	34 LF	0703-MAH-148A	07/14/03	3% CH	NO	UNDAMAGED	HIGH	5	O&M	THIS MATERIAL IS LOCATED AROUND THE DOORS LEADING TO STORAGE 1 AND STORAGE 2.
					0703-MAH-148B	07/14/03	3% CH						
					0703-MAH-148C	07/14/03	5% CH						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0746 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
006	CEILING TILES (2' X 2' WHITE, FISSURED, SUSPENDED)	MACM	B3, B5	1,900 SF	38637	10/01/88	ND						
					38644	10/01/88	ND						
010	ACOUSTICAL WALL PANELS (5' X 8' WHITE, COMPRESSED CEMENT AND PAPER, SCREWED-ON)	MACM	STORAGE 2	120 SF	38649	10/01/88	ND						
					38650	10/01/88	ND						
052	WALL PLASTER (WHITE)	SACM	B1, B1B, B2, B3, B4A, B5, DARKROOM, J1, STORAGE, STORAGE 1, STORAGE 2, STORAGE 3, V1	12,395 SF	0516-MAH-022A	05/16/90	ND						*SAMPLES WERE REANALYZED USING SEM TECHNIQUES. THE RESULTS OF THE ANALYTICAL TESTS WERE LESS THAN 1% ASBESTOS. THIS MATERIAL IS NOT CONSIDERED TO BE ACM.
					0516-MAH-022A	05/16/90	ND*						
					0516-MAH-022B	05/16/90	<1% CH						
					0516-MAH-022B	05/16/90	ND*						
					0516-MAH-022C	05/16/90	<1% CH						
					0516-MAH-022C	05/16/90	ND*						
					0510-MAH-052A	05/10/91	ND						
					0510-MAH-052B	05/10/91	ND						
					0510-MAH-052C	05/10/91	ND						
					0510-MAH-052D	05/10/91	ND						
					0510-MAH-052E	05/10/91	ND						
					0510-MAH-052F	05/10/91	ND						
					0510-MAH-052G	05/10/91	ND						
080	FLOOR ADHESIVE (YELLOW, UNDER 9" X 9" BLUE VINYL FLOOR TILE)	MACM	B4, B4A, B5	3,575 SF	0516-MAH-019A	05/30/90	ND						THIS IS THE ADHESIVE FOR MATERIAL #003.
					0516-MAH-019B	05/30/90	ND						
					0516-MAH-019C	05/30/90	ND						
092	ACOUSTICAL WALL PANELS (2' X 4' WHITE, SMOOTH SURFACE, STAPLED-ON)	MACM	B1	1,336 SF	1196-MAH-092A	11/13/96	ND						
					1196-MAH-092B	11/13/96	ND						
					1196-MAH-092C	11/13/96	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**INSPECTION DATE: 9 - 14 JUL 2003**  
**BUILDING NUMBER: 0746 (Unknown)**

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
093	CEILING TILES (2' X 2' WHITE, SMOOTH SURFACE, SUSPENDED)	MACM	B1, B1A, B1B, B2, B3	464 SF	1196-MAH-093A	11/13/96	ND						
					1196-MAH-093B	11/13/96	ND						
					1196-MAH-093C	11/13/96	ND						
097	EXTERIOR PLASTERS (WHITE, ROUGH STUCCO)	SACM	EXTERIOR OF BUILDING	4,560 SF	1196-MAH-097A	11/13/96	ND						
					1196-MAH-097B	11/13/96	ND						
					1196-MAH-097C	11/13/96	ND						
101	WALLBOARD (1/2" TAN PAPER, SMOOTH SURFACE, WHITE CORE)	MACM	B1, B1A, B1B, B4, B5	2,650 SF	0301-MAH-101A	03/16/01	ND						THE JOINT COMPOUND FOR THIS MATERIAL IS MATERIAL #102.
					0301-MAH-101B	03/16/01	ND						
					0301-MAH-101C	03/16/01	ND						
102	JOINT COMPOUND (WHITE)	MACM	B1, B1A, B1B, B4, B5	265 SF	0301-MAH-102A	03/16/01	ND						THIS IS THE JOINT COMPOUND FOR MATERIAL #101.
					0301-MAH-102B	03/16/01	ND						
					0301-MAH-102C	03/16/01	ND						
103	FLOOR ADHESIVE (TAN, UNDER GREEN AND BLUE CARPETS)	MACM	B1, B1A, B1B, B2	2,800 SF	0301-MAH-103A	03/16/01	ND						
					0301-MAH-103B	03/16/01	ND						
					0301-MAH-103C	03/16/01	ND						
104	SINK COATING (GRAY)	MACM	B5	2 EA	0301-MAH-104A	03/16/01	ND						
					0301-MAH-104B	03/16/01	ND						
					0301-MAH-104C	03/16/01	ND						
105	WALLBOARD (WHITE)	MACM	B2, B3	1,000 SF	0301-MAH-105A	03/16/01	ND						THE JOINT COMPOUND FOR THIS MATERIAL IS MATERIAL #106.
					0301-MAH-105B	03/16/01	ND						
					0301-MAH-105C	03/16/01	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0746 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						
106	JOINT COMPOUND (WHITE)	MACM	B2, B3	100 SF	0301-MAH-106A	03/16/01	ND						THIS IS THE JOINT COMPOUND FOR MATERIAL #105.
					0301-MAH-106B	03/16/01	ND						
					0301-MAH-106C	03/16/01	ND						
107	WALLBOARD (WHITE)	MACM	STORAGE	20 SF	0301-MAH-107A	03/16/01	ND						THE JOINT COMPOUND FOR THIS MATERIAL IS MATERIAL #108.
					0301-MAH-107B	03/16/01	ND						
					0301-MAH-107C	03/16/01	ND						
108	JOINT COMPOUND (WHITE)	MACM	STORAGE	2 SF	0301-MAH-108A	03/16/01	ND						THIS IS THE JOINT COMPOUND FOR MATERIAL #107.
					0301-MAH-108B	03/16/01	ND						
					0301-MAH-108C	03/16/01	ND						
146	FLOOR ADHESIVE (BLACK, UNDER DARK GRAY WITH MULTICOLORED SPECKS CARPET)	MACM	B3	840 SF	0703-MAH-146A	07/14/03	ND						
					0703-MAH-146B	07/14/03	ND						
					0703-MAH-146C	07/14/03	ND						
147	SHEET GASKET (2" - 4" DIAMETER, GRAY, ON PIPE FLANGE CONNECTIONS)	MACM	B4	20 EA	0703-MAH-147A	07/14/03	ND						
					0703-MAH-147B	07/14/03	ND						
					0703-MAH-147C	07/14/03	ND						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0746 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						

THE FOLLOWING MATERIALS COULD NOT BE LOCATED IN BUILDING 0746 (Unknown)

005	WINDOWSILLS (BLACK CEMENT)	MACM	B5	80 SF	38634	07/11/88	10% CH						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38638	07/11/88	10% CH						
007	GLOVES (WELDING GLOVES)	MACM	STORAGE 2	0 EA	38642	07/11/88	75% CH						2 GLOVES WERE REMOVED PRIOR TO 1994.
					38643	07/11/88	75% CH						
009	SHEET GASKET (FLANGE GASKETS)	MACM	B4	0 EA	38645	07/11/88	65% CH						20 GASKETS WERE REMOVED IN AUGUST 1994.
					38646	07/11/88	85% CH						

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

INSPECTION DATE: 9 - 14 JUL 2003  
BUILDING NUMBER: 0746 (Unknown)

**TABLE 4.1 - RESULTS OF THE INSPECTION**

HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	AHERA CAT.	MATERIAL LOCATION(S)	QTY.	SAMPLE INFORMATION			FRI- ABLE	OVERALL CONDITION	ACCESS.	EPA ASS. CAT	MANAGE- MENT ACTION	COMMENTS
					NUMBER	DATE	RESULT						

THE FOLLOWING MATERIALS COULD NOT BE LOCATED IN BUILDING 0746 (Unknown)

001	WALL AND CEILING BOARD (4' X 8' PANELS, RANDOM HOLE PATTERN)	MACM	B1	2,300 SF	38628	10/01/88	ND						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38635	10/01/88	ND						
002	VINYL FLOOR TILE (1' X 1' GRAY)	MACM	B1	100 SF	38629	10/01/88	ND						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38632	10/01/88	ND						
004	CEILING TILES (1' X 1' WALL AND CEILING TILES, RANDOM HOLE PATTERN, GLUED-ON)	MACM	B1	1,100 SF	38633	10/01/88	ND						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
					38636	10/01/88	ND						
013	WALLBOARD (WALL TILE)	MACM	B1A	0 SF	0516-MAH-023	05/30/90	ND						AT THE TIME OF THE 1997 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.
081	WALL TILE	MACM	B4	0 SF	0516-MAH-021	05/30/90	ND						AT THE TIME OF THE 2000 AHERA INSPECTION, THIS PREVIOUSLY IDENTIFIED MATERIAL COULD NOT BE LOCATED.

## **5.0 RECOMMENDED MANAGEMENT ACTIONS**

Table 5.1 presents recommended management actions for all ACM identified and confirmed to be present during the 2003 inspection. The information on Table 5.1 is grouped by building for each building included in the inventory at the time of the 2003 inspection. Consult the Asbestos Management Plan and the Operations and Maintenance Manual for additional management action information.



**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS**

BUILDING NUMBER	HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)
0286 (Unknown)	004	SHEET GASKET (2" - 6" DIAMETER, RED, ON PIPE FLANGE CONNECTIONS)	ART SUPPLY ROOM 2, HEAT EXCHANGER AREA, HVAC 1, HVAC 2, SUPPLY ROOM		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.
0286 (Unknown)	005	VINYL FLOOR TILE (1' X 1' ORANGE WITH RED STREAKS)	100, 105, 106	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #046. THIS MATERIAL IS LOCATED BELOW THE EXISTING FLOORING MATERIAL.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.
0286 (Unknown)	006	CEMENT DUCT (18" X 18" X 36" GRAY, FLUE PIPE)	100, 105, 106, 200, 207, 208		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.
0286 (Unknown)	007	VINYL FLOOR TILE (1' X 1' BEIGE)	102, 212A, 214A	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #075.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.
0286 (Unknown)	026	CEMENT WALL PANELS (3' X 8' WHITE)	116, 116A		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.
0286 (Unknown)	032	VINYL FLOOR TILE (10" X 10" BEIGE)	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #047.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.
0286 (Unknown)	035	CEMENT WALL PANELS (GRAY, DEFLECTOR PANEL BOARD)	ROOF		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS**

<b>BUILDING NUMBER</b>	<b>HOMO. MATRL. NO.</b>	<b>MATERIAL TYPE (MATERIAL DESCRIPTION)</b>	<b>MATERIAL LOCATION(S)</b>	<b>COMMENTS</b>	<b>RECOMMENDED MANAGEMENT ACTION(S)</b>
0286 (Unknown)	038	CEMENT WALL PANELS (4' X 8' WHITE)	110, 110A, 112		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0286 (Unknown)	046	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' ORANGE WITH RED STREAKS VINYL FLOOR TILE)	100, 105, 106	THIS IS THE ADHESIVE FOR MATERIAL #005.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0286 (Unknown)	047	FLOOR ADHESIVE (BLACK, UNDER 10" X 10" BEIGE VINYL FLOOR TILE)	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	THIS IS THE ADHESIVE FOR MATERIAL #032.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0286 (Unknown)	084	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' WHITE WITH BLUE AND BLACK STREAKS VINYL FLOOR TILE)	216	THIS IS THE ADHESIVE FOR MATERIAL #023.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0286 (Unknown)	089	FLOOR ADHESIVE (BLACK, UNDER 9" X 9" GRAY VINYL FLOOR TILE)	CORRIDOR D, 109, 110, 110A, 110C, 113A, 116, 116A, 116B, 211	THIS IS THE ADHESIVE FOR MATERIAL #022. SIX SF OF THIS MATERIAL ARE EXPOSED AND NEED TO BE REPAIRED.	<ol style="list-style-type: none"> <li>1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT.</li> <li>2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS.</li> <li>3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED.</li> <li>4. CONSULT THE O &amp; M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL.</li> <li>5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0286 (Unknown)	090	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' GRAY WITH BLACK STREAKS VINYL FLOOR TILE)	111, 111B, 111C	THIS IS THE ADHESIVE FOR MATERIAL #025.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS**

<b>BUILDING NUMBER</b>	<b>HOMO. MATRL. NO.</b>	<b>MATERIAL TYPE (MATERIAL DESCRIPTION)</b>	<b>MATERIAL LOCATION(S)</b>	<b>COMMENTS</b>	<b>RECOMMENDED MANAGEMENT ACTION(S)</b>
0286 (Unknown)	091	FLOOR ADHESIVE (BLACK, UNDER 9" X 9" RED WITH WHITE AND BLACK STREAKS VINYL FLOOR TILE)	218A	THIS IS THE ADHESIVE FOR MATERIAL #037.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0286 (Unknown)	133	SHEET GASKET (2" - 6" DIAMETER, GRAY, ON PIPE FLANGE CONNECTIONS)	HEAT EXCHANGER AREA		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0286 (Unknown)	136	VINYL FLOOR TILE (10" X 10" WHITE WITH BLACK STREAKS)	STORAGE 5	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #137. THREE SF OF THIS MATERIAL ARE DAMAGED AT THE DOORWAY AND NEED TO BE REPAIRED.	<ol style="list-style-type: none"> <li>1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT.</li> <li>2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS.</li> <li>3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED.</li> <li>4. CONSULT THE O &amp; M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL.</li> <li>5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0286 (Unknown)	137	FLOOR ADHESIVE (BLACK, UNDER 10" X 10" WHITE WITH BLACK STREAKS VINYL FLOOR TILE)	STORAGE 5	THIS IS THE ADHESIVE FOR MATERIAL #136.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0736 (Unknown)	055	SHEET GASKET (2" - 6" DIAMETER, BLACK, ON PIPE FLANGE CONNECTIONS)	BALCONY 2, BOILER ROOM		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0736 (Unknown)	130	SHEET GASKET (2" - 6" DIAMETER, RED, ON PIPE FLANGE CONNECTIONS)	BOILER ROOM		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS**

BUILDING NUMBER	HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)
0746 (Unknown)	003	VINYL FLOOR TILE (9" X 9" BLUE)	B4, B4A, B5	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #080. 13 SF OF THIS MATERIAL ARE DAMAGED AND NEED TO BE REPAIRED IN ROOMS B4 AND B5.	<ol style="list-style-type: none"> <li>1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT.</li> <li>2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS.</li> <li>3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED.</li> <li>4. CONSULT THE O &amp; M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL.</li> <li>5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0746 (Unknown)	008	VINYL FLOOR TILE (9" X 9" BLACK WITH WHITE STREAKS)	DARKROOM	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #070. SIX SF OF THIS MATERIAL ARE DAMAGED AND NEED TO BE REPAIRED.	<ol style="list-style-type: none"> <li>1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT.</li> <li>2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS.</li> <li>3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED.</li> <li>4. CONSULT THE O &amp; M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL.</li> <li>5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0746 (Unknown)	053	FIRE DOOR LINING (WHITE, ENCLOSED IN METAL)	B4	THERE ARE 3 SINGLE DOORS AND 1 DOUBLE DOOR (2 EACH).	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0746 (Unknown)	055	CEMENT WALL PANELS (BLACK CEMENT)	B5		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>
0746 (Unknown)	070	FLOOR ADHESIVE (YELLOW, UNDER 9" X 9" BLACK WITH WHITE STREAKS VINYL FLOOR TILE)	DARKROOM	THIS IS THE ADHESIVE FOR MATERIAL #008.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS**

BUILDING NUMBER	HOMO. MATRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)
--------------------	------------------------	--	-------------------------	----------	--

0746  
(Unknown)

148

CAULK  
(GRAY)

B4

THIIS MATERIAL IS LOCATED AROUND THE  
DOORS LEADING TO STORAGE 1 AND  
STORAGE 2.

1. NO IMMEDIATE ABATEMENT REQUIRED.
2. CONSULT THE O & M MANUAL CONCERNING SAFE  
CUSTODIAL PROCEDURES FOR THIS MATERIAL.
3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER  
THE ASBESTOS MANAGEMENT PLAN.

**APPENDIX A**

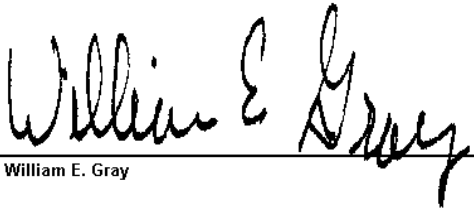
**AHERA ACCREDITATION STATEMENT**

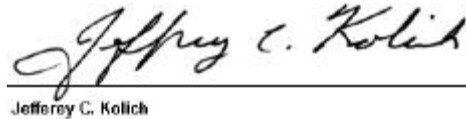
**AND**

**INSPECTORS' CERTIFICATES**

**This report was prepared by Baker Environmental, Inc., Coraopolis, Pennsylvania, for the Department of Defense Education Activity (DODEA). The inspection was performed in a manner consistent with applicable regulations and guidelines.**

**The inspectors who inspected this school are accredited in accordance with Section 206 of Title II under the Asbestos Hazard Emergency Response Act (AHERA). The credentials are copied on the following pages.**

  
William E. Gray

  
Jeffrey C. Kolich

# Professional Training Associates, Inc.

## ASBESTOS BUILDING INSPECTOR

### Refresher Training Course

**Jeffrey C. Kolich**

has successfully completed the Asbestos Building Inspector Refresher Course and passed the course examination for purposes of accreditation under Section 206 of Title II of the Toxic Substance Control Act (TSCA). Conducted by Professional Training Associates, Inc., 46 South Linden Street, Suite C, Duquesne, PA 15110, (412) 460-0266.

KOLICHJ  
BIR030603DUQUESN

Location: **Duquesne, PA**

Examination: **March 6, 2003**

Course Date: **March 6, 2003**

Expiration: **March 6, 2004**

Course Director:

  
John J. Curcio

Certificate Number: **PTA 03 - 23 - 11418**

# Professional Training Associates, Inc.

## ASBESTOS BUILDING INSPECTOR Refresher Training Course

**William Gray**

has successfully completed the Asbestos Building Inspector Refresher Course and passed the course examination for purposes of accreditation under Section 206 of Title II of the Toxic Substance Control Act (TSCA). Conducted by Professional Training Associates, Inc., 46 South Linden Street, Suite C, Duquesne, PA 15110, (412) 460-0266.

GRAYWIZ  
BIR091202DUQUESN

Location:

**Duquesne, PA**

Examination:

**September 12, 2002**

Course date:

**September 12, 2002**

Expiration:

**September 12, 2003**

Course Director:

  
**John J. Curcio**

Certificate Number:

**PTA 02 - 23 - 10239**



## **APPENDIX B**

## **GLOSSARY**

## **GLOSSARY**

### **Abatement**

Procedures which are implemented to remove asbestos materials from a damaged area, functional space, or a homogeneous area.

### **Asbestos**

A group of naturally occurring minerals that can be separated into fibers which are flexible, heat resistant and chemically inert. The following asbestos minerals are used commercially: Actinolite, Amosite, Anthophyllite, Chrysotile, Crocidolite, and Tremolite.

### **Asbestos-Containing Material (ACM)**

Per EPA regulations, any material that contains more than 1.0 percent asbestos by weight.

### **Asbestos Coordinator (AC)**

The person at the local level who serves as a focal point or liaison for asbestos activities. Per DODEA Asbestos Management Policy, this person is the Principal of a school, or District Superintendent at a DSO.

### **Asbestos Hazard Emergency Response Act (AHERA)**

An Act passed by Congress and signed by the President in October 1986 which requires the EPA to promulgate regulations requiring inspections for ACM, development of asbestos management plans, and management actions with respect to friable ACM in U.S. schools including DODDS.

### **Asbestos Management Plan**

Required by AHERA, a plan detailing the steps taken to control potential asbestos hazards in school buildings.

**Asbestos Management Program**

A program instituted by DODEA to comply with AHERA and to administer long-term control and surveillance of all ACM in school buildings.

**Containment System**

A separation or barrier system that prevents the movement of asbestos-contaminated air from the abatement work area into uncontaminated areas.

**Encapsulation**

The treatment of ACM with a penetrating or surface sealant in order to minimize the potential for asbestos fiber release.

**Enclosure**

The system of containment that creates an airtight seal or barrier between the ACM and the adjacent space.

**EPA**

Environmental Protection Agency

**Friable**

Any material which, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure.

**Homogeneous Sampling Area**

An area of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color or texture, serves the same function, and was installed at the same time.

**Removal**

The removal of ACM from any surface or component in all or a portion of a building.

**Operations and Maintenance (O&M) Program**

A program specifically designed to clean up asbestos fibers previously released, to prevent the release of fibers by minimizing ACM disturbance or damage, and to monitor the condition of the ACM.

**Surveillance**

Periodic inspection of friable and non-friable ACM on a frequency consistent with the requirements of the AHERA regulations.

## **APPENDIX C**

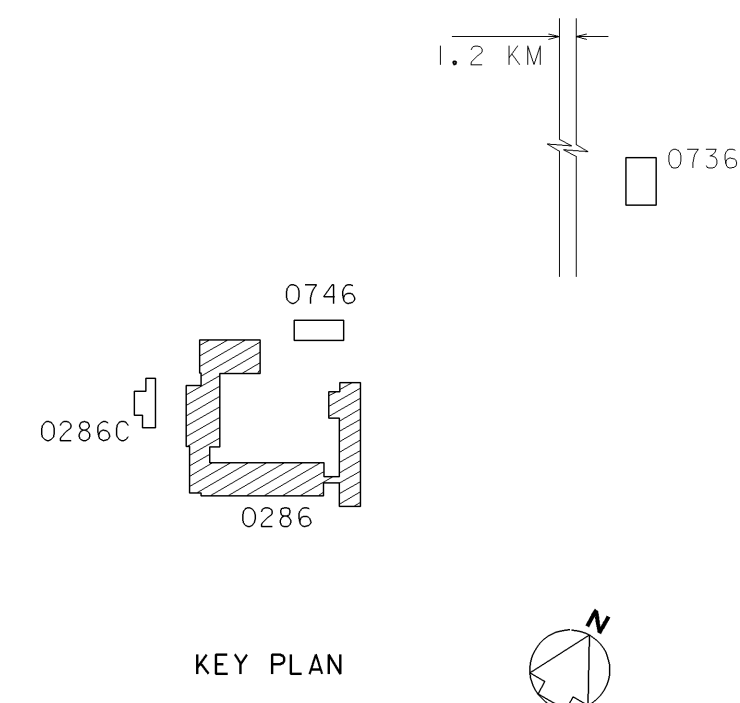
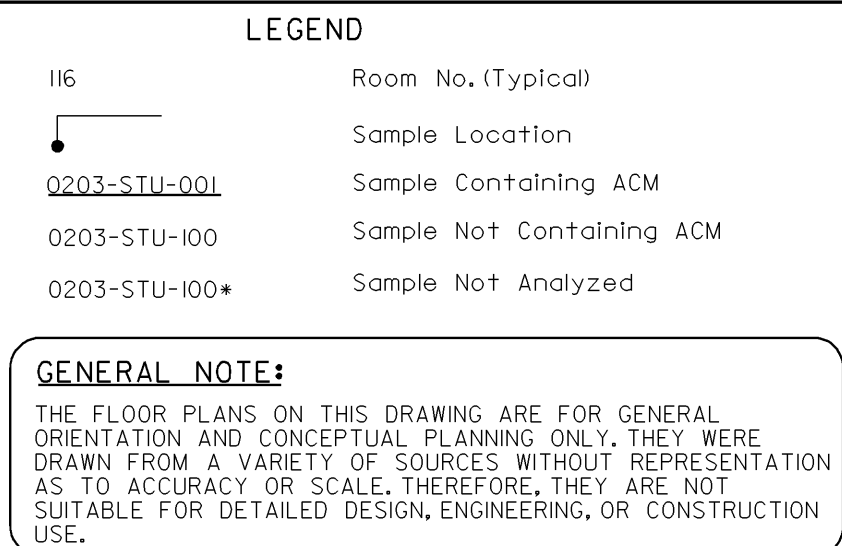
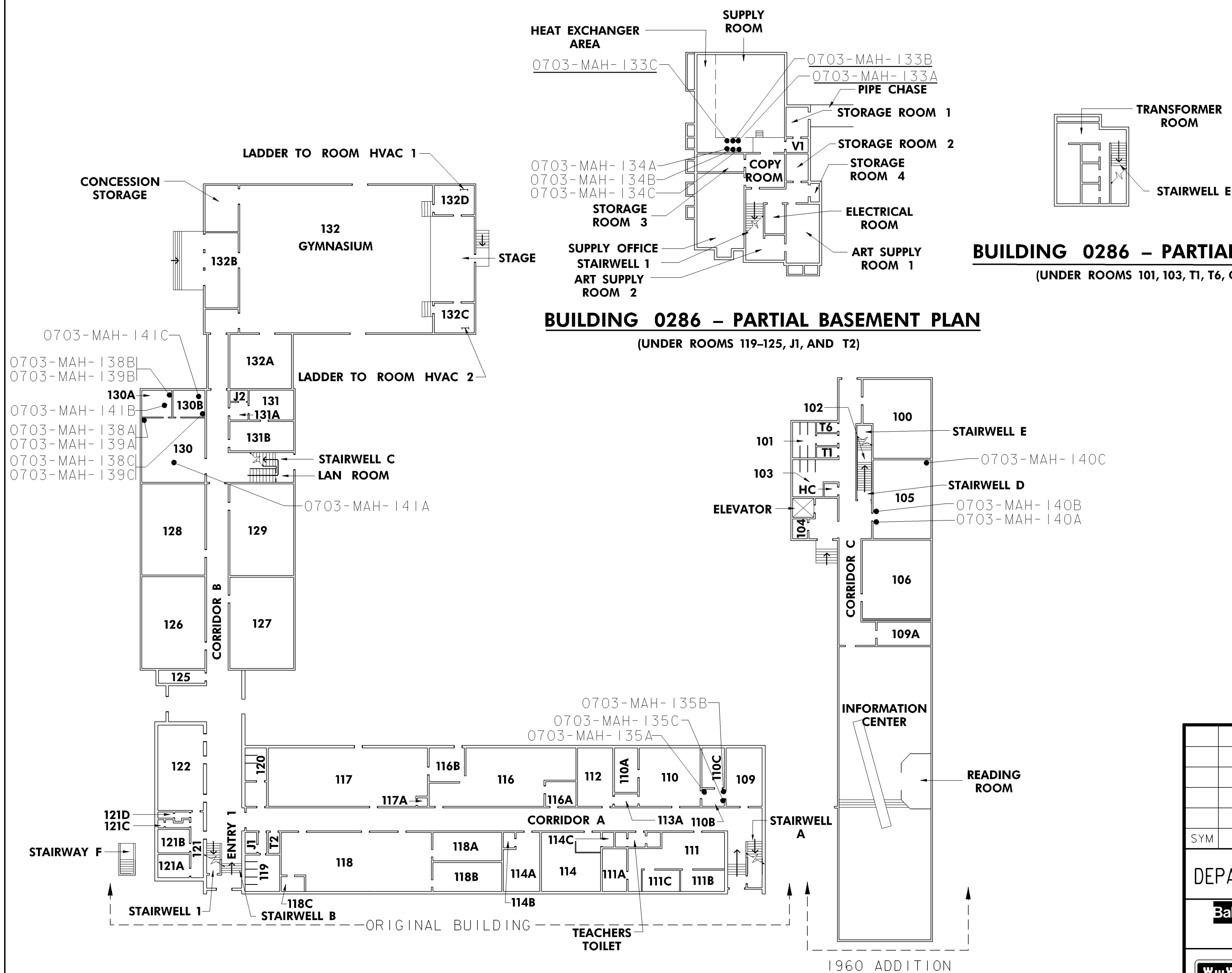
### **PLANS OF SAMPLE LOCATIONS**


## **Common Spaces**

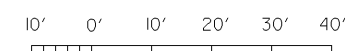
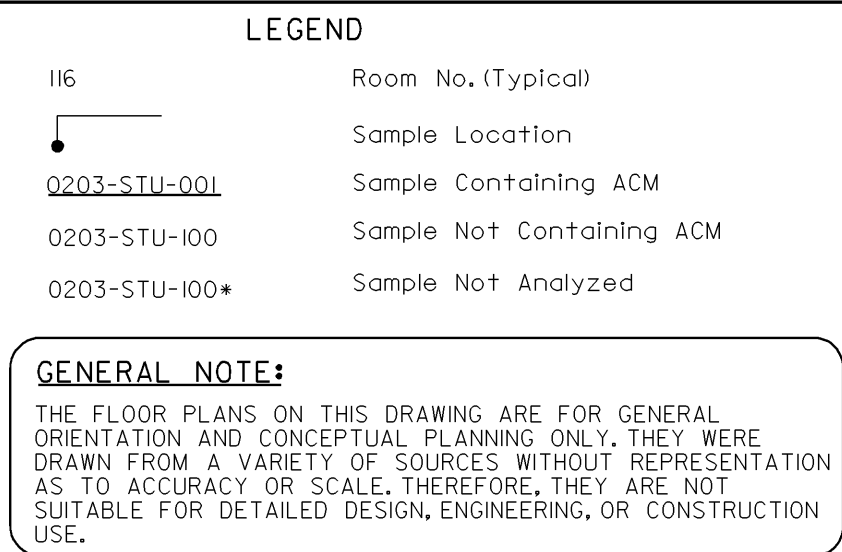
### **Abbreviations and Designations**


Room abbreviations and designations that may be used on the following sample location drawings are:

<b>BR</b>	-	<b>Boiler Room</b>
<b>E</b>	-	<b>Entry</b> - Exterior side of entry door
<b>ER</b>	-	<b>Electrical Rooms</b> - Includes telephone connection closets or LAN connection rooms
<b>J</b>	-	<b>Janitors Closets</b> - These are small spaces under stairwells and where cleaning supplies are stored
<b>K</b>	-	<b>Kitchen</b> - Includes dishwashing areas
<b>LR</b>	-	<b>Locker Room</b>
<b>MR</b>	-	<b>Mechanical Room</b> - Includes utility rooms and rooms housing air handling units
<b>PC</b>	-	<b>Pipe Chase</b>
<b>SH</b>	-	<b>Shower</b>
<b>SL</b>	-	<b>Stairwell</b>
<b>SY</b>	-	<b>Stairway</b>
<b>T</b>	-	<b>Toilets</b> - Includes Boys, Girls, Mens, Womens, Staff, Handicapped, and small classroom toilets
<b>V</b>	-	<b>Vestibules</b> - Small lobbies and very short corridors near entrances of buildings

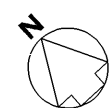


SYM	REVISIONS	DATE	APPROVED
DEPARTMENT OF DEFENSE DEPENDENTS SCHOOLS			
<b>Baker</b>	Baker Environmental <small>A Unit of Michael Baker Corporation</small>  100 Airside Drive Moon Township, PA 15108	U.S. ARMY CORPS OF ENGINEERS TRANSATLANTIC PROGRAMS CENTER	
 U.S. Army Corps of Engineers	<b>ASBESTOS SAMPLE LOCATIONS</b> <b>2003 AHERA INSPECTION</b>  <b>MANNHEIM AMERICAN HIGH SCHOOL</b> <b>MANNHEIM, GERMANY</b> <b>HE 3411</b> <b>BUILDING 0286 – FIRST FLOOR AND</b> <b>PARTIAL BASEMENT PLANS</b>		
SHEET REF. NO.  <b>I</b>	MED FILE NO.		SHEET

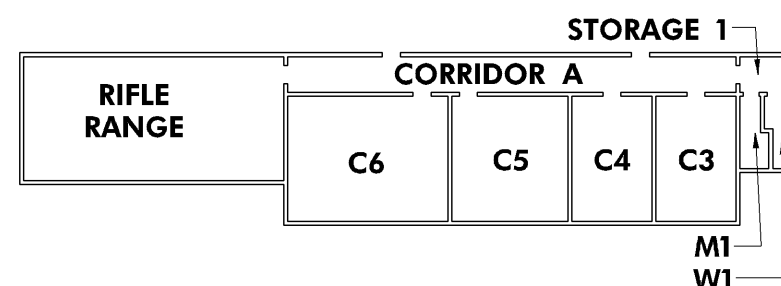


SYM	REVISIONS	DATE	APPROVED
DEPARTMENT OF DEFENSE DEPENDENTS SCHOOLS			
<b>Baker</b> Baker Environmental <i>A Unit of Michael Baker Corporation</i> 100 Airside Drive Moon Township, PA 15108		<b>U.S. ARMY CORPS OF ENGINEERS          TRANSATLANTIC PROGRAMS CENTER</b>	
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  <p>US Army Corps of Engineers</p> </div> <div style="text-align: center;"> <p><b>ASBESTOS SAMPLE LOCATIONS 2003 AHERA INSPECTION</b></p> <p><b>MANNHEIM AMERICAN HIGH SCHOOL MANNHEIM, GERMANY HE 3411 BUILDING 0286 SECOND FLOOR PLAN</b></p> </div> </div>			
SHEET REF. NO. <div style="font-size: 2em; font-weight: bold; text-align: center;">2</div>		MED FILE NO.	
		SHEET	





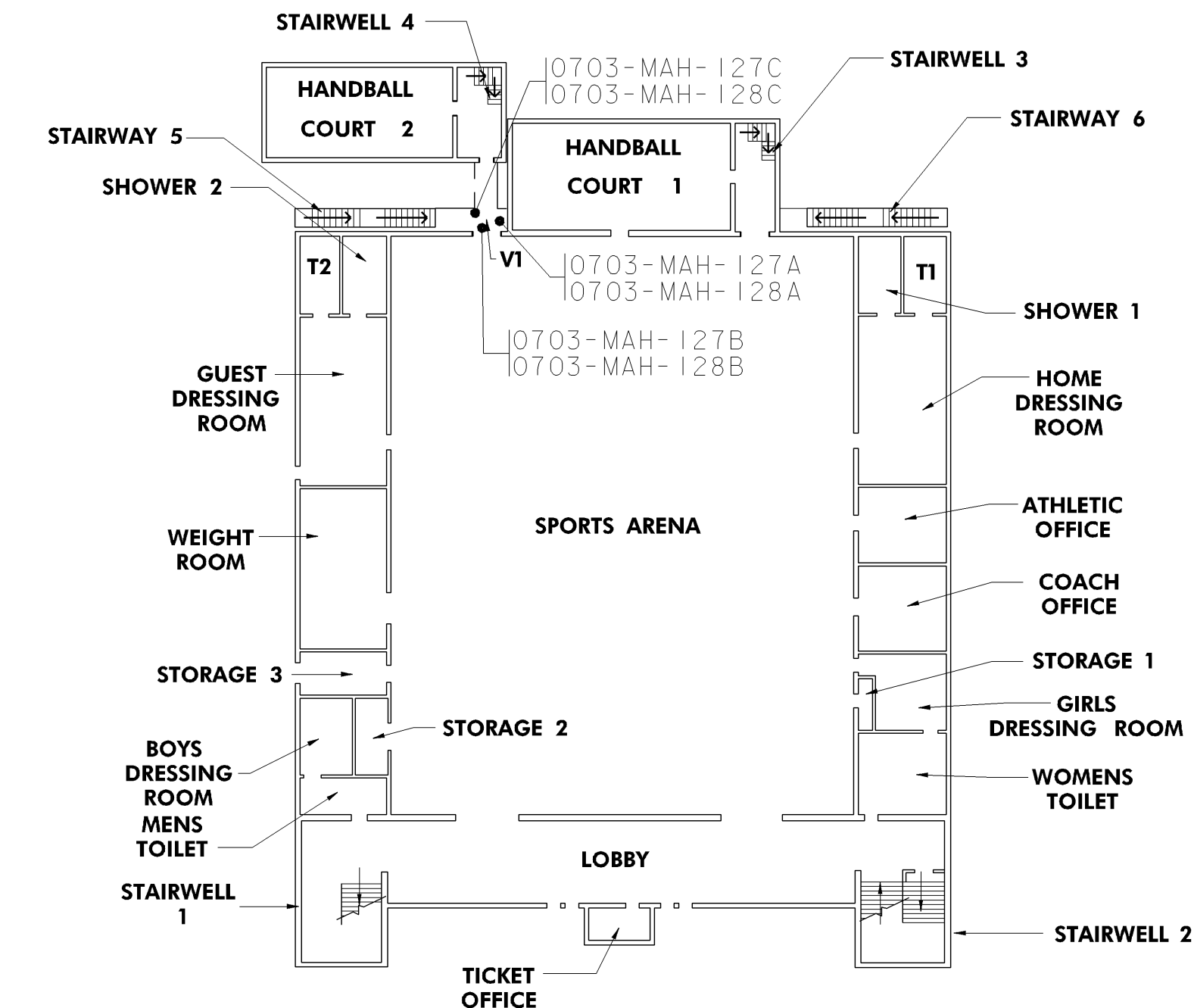
## BUILDING 0286C – FLOOR PLAN



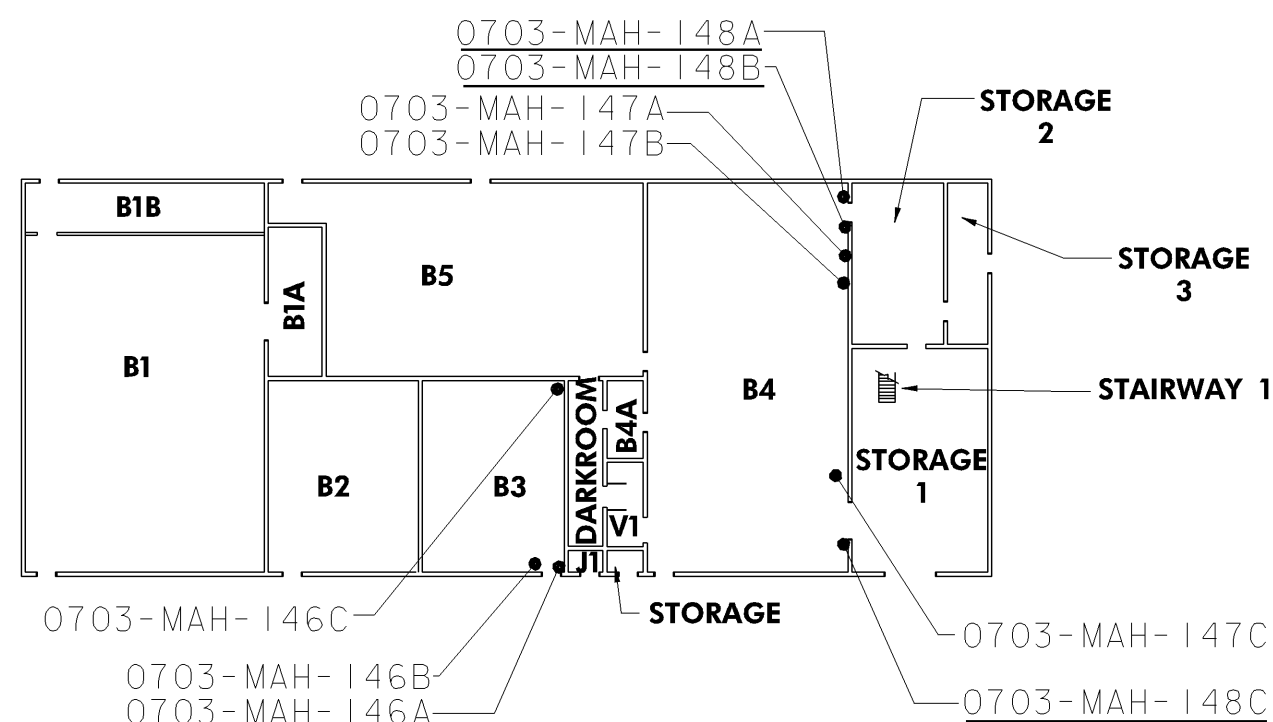
MEZZANINE

STAIRWAY 1

## BUILDING 0746 – MEZZANINE PLAN



## BUILDING 0736 – FIRST FLOOR PLAN



## BUILDING 0746 – FIRST FLOOR PLAN

NOTE:  
ONLY SAMPLES TAKEN  
DURING THE AHERA  
INSPECTION ARE SHOWN.

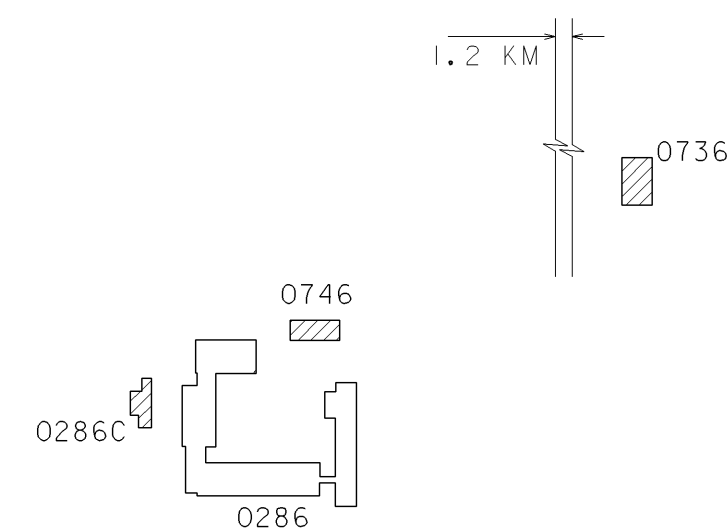
10' 0' 10' 20' 30' 40'

### LEGEND

I16	Room No. (Typical)
	Sample Location
0203-STU-001	Sample Containing ACM
0203-STU-100	Sample Not Containing ACM
0203-STU-100*	Sample Not Analyzed

### GENERAL NOTE:

THE FLOOR PLANS ON THIS DRAWING ARE FOR GENERAL ORIENTATION AND CONCEPTUAL PLANNING ONLY. THEY WERE DRAWN FROM A VARIETY OF SOURCES WITHOUT REPRESENTATION AS TO ACCURACY OR SCALE. THEREFORE, THEY ARE NOT SUITABLE FOR DETAILED DESIGN, ENGINEERING, OR CONSTRUCTION USE.



KEY PLAN



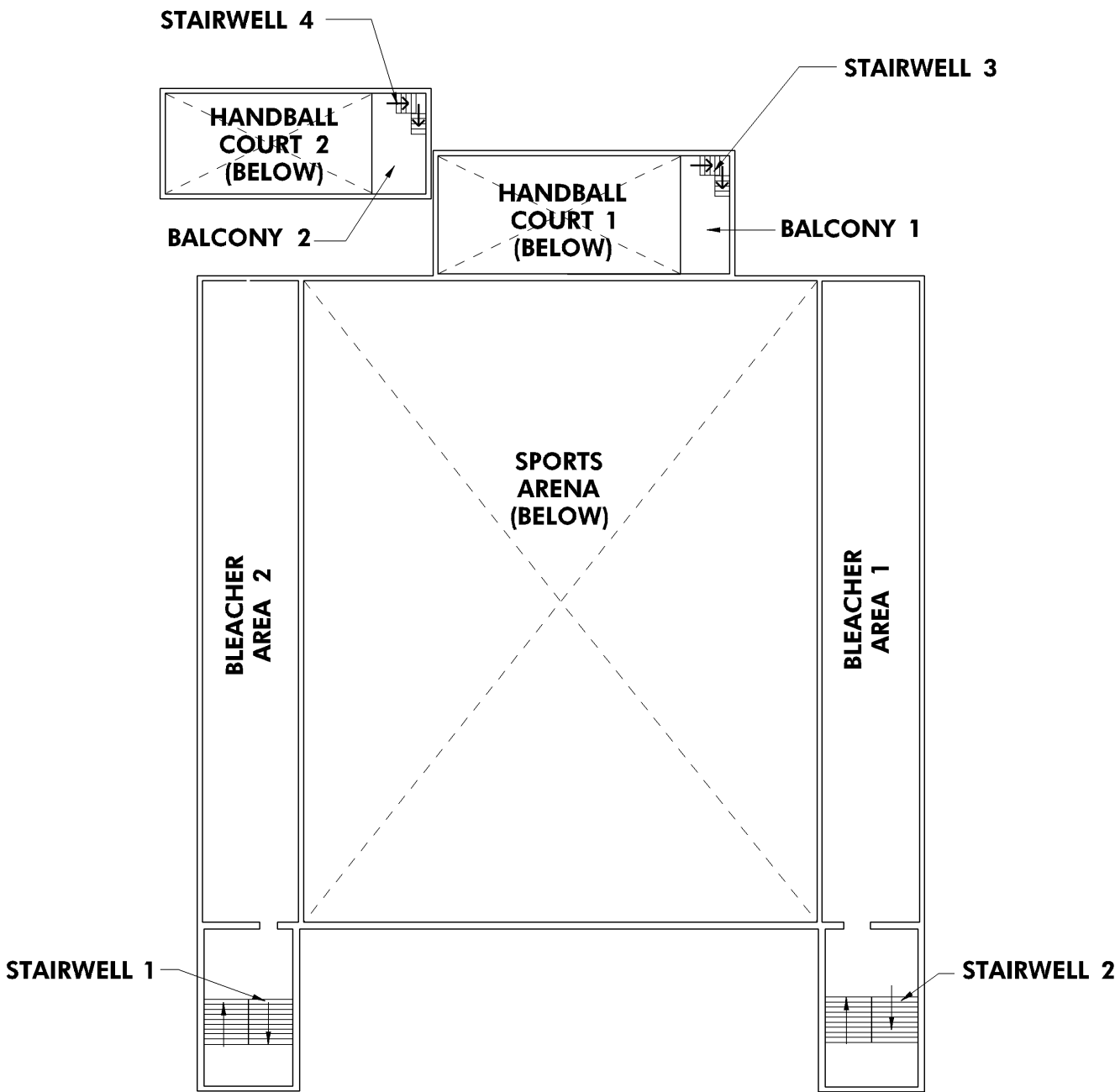
SYM	REVISIONS	DATE	APPROVED
DEPARTMENT OF DEFENSE DEPENDENTS SCHOOLS			
<b>Baker</b> Baker Environmental A Unit of Michael Baker Corporation 100 Airside Drive Moon Township, PA 15108		<b>U.S. ARMY CORPS OF ENGINEERS</b> TRANSATLANTIC PROGRAMS CENTER	
<b>ASBESTOS SAMPLE LOCATIONS</b> <b>2003 AHERA INSPECTION</b> <b>MANNHEIM AMERICAN HIGH SCHOOL</b> <b>MANNHEIM, GERMANY</b> <b>HE 3411</b> <b>BUILDINGS 0286C – FLOOR PLAN,</b> <b>BUILDING 0736 – FIRST FLOOR PLAN,</b> <b>BUILDING 0746 – FIRST FLOOR PLAN</b> <b>AND MEZZANINE PLANS</b>			
SHEET REF. NO. <b>3</b>		MED FILE NO. SHEET	

LEGEND

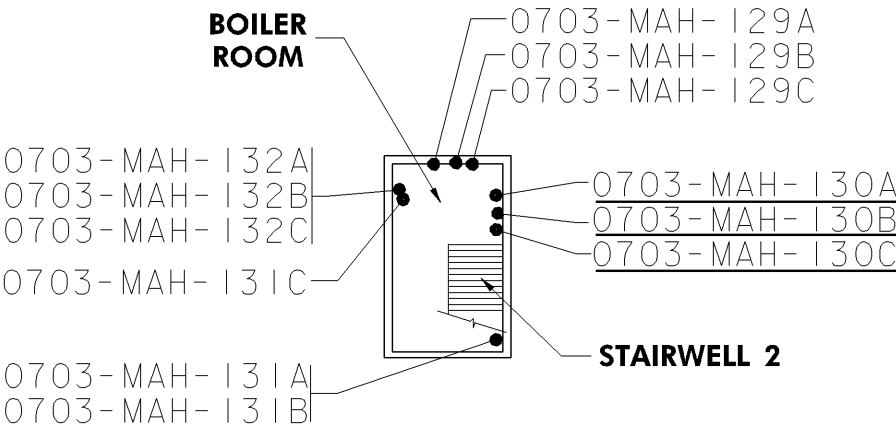
116	Room No. (Typical)
	Sample Location
0203-STU-001	Sample Containing ACM
0203-STU-100	Sample Not Containing ACM
0203-STU-100*	Sample Not Analyzed

GENERAL NOTE:

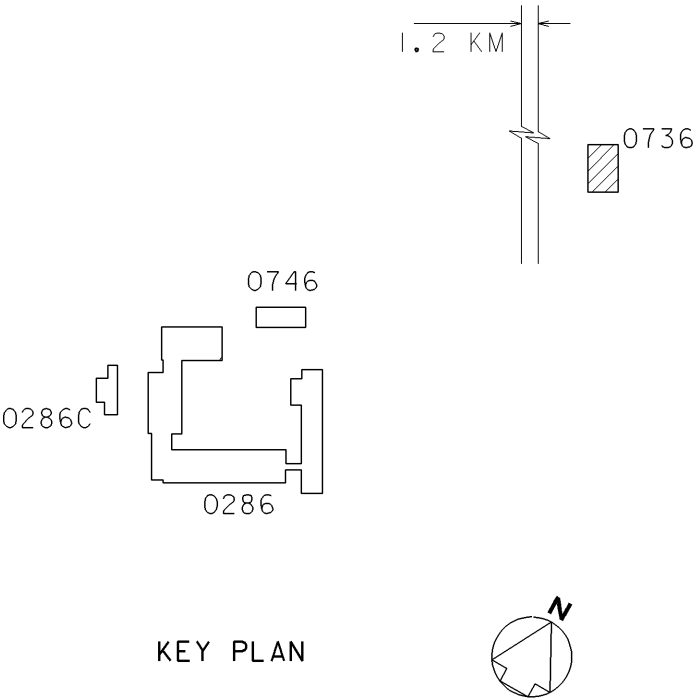
THE FLOOR PLANS ON THIS DRAWING ARE FOR GENERAL ORIENTATION AND CONCEPTUAL PLANNING ONLY. THEY WERE DRAWN FROM A VARIETY OF SOURCES WITHOUT REPRESENTATION AS TO ACCURACY OR SCALE. THEREFORE, THEY ARE NOT SUITABLE FOR DETAILED DESIGN, ENGINEERING, OR CONSTRUCTION USE.



BUILDING 0736 – SECOND FLOOR PLAN

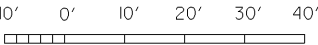


BUILDING 0736 – BASEMENT PLAN  
(UNDER STAIRWELL 2)



KEY PLAN

NOTE:  
ONLY SAMPLES TAKEN  
DURING THE AHERA  
INSPECTION ARE SHOWN.



SYM	REVISIONS	DATE	APPROVED

DEPARTMENT OF DEFENSE DEPENDENTS SCHOOLS

<b>Baker</b> Baker Environmental A Unit of Michael Baker Corporation 100 Airside Drive Moon Township, PA 15108	<b>U.S. ARMY CORPS OF ENGINEERS TRANSATLANTIC PROGRAMS CENTER</b>
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ASBESTOS SAMPLE LOCATIONS  
2003 AHERA INSPECTION

**MANNHEIM AMERICAN HIGH SCHOOL  
MANNHEIM, GERMANY  
HE 3411  
BUILDING 0736  
BASEMENT AND SECOND FLOOR PLANS**

SHEET REF. NO.

4

MED FILE NO.

SHEET

## **APPENDIX D**

### **LABORATORY SAMPLE ANALYSIS REPORTS**

# RJ Lee Group, Inc.

350 Hochberg Road, Monroeville, PA 15146

Phone: (724) 325-1776 Fax: (724) 733-1799

## Laboratory Report

Baker Environmental  
Airside Business Park  
100 Airside Drive  
Moon Township, PA 15108  
Attention: Ms. Donna M. Neal  
Telephone: 412-269-6300

Report Date 7/22/2003  
Sample Receipt Date. 7/18/2003  
RJ Lee Group Job No BAK307038  
Client Job No. 101323 1.1/Mannheim American  
High School HF 3411  
Authorization/P.O. No. 101323 1.1

Analysis: Asbestos in Bulk Samples  
Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst	Analysis Date
2622279.HPL Description: Light Beige Drywall	0703-MAH-127A	Yes	ND	2 CE	98 %	B, G, M	AKB	7/21/2003
2622280.HPL Description: Light Beige Drywall	0703-MAH-127B	Yes	ND	3 CE	97 %	B, G, M	AKB	7/21/2003
2622281.HPL Description: Light Beige Drywall	0703-MAH-127C	Yes	ND	2 CE	98 %	B, G, M	AKB	7/21/2003
2622282.HPL Description: White Joint Compound	0703-MAH-128A	Yes	ND	5 CE	95 %	B, M	AKB	7/21/2003
2622283.HPL Description: Light Beige Drywall	0703-MAH-128B	Yes	ND	3 CE	97 %	B, G, M	AKB	7/21/2003
2622284.HPL Description: White Joint Compound	0703-MAH-128C	Yes	ND	5 CE	95 %	B, M	AKB	7/21/2003

## RJ Lee Group, Inc.

## Laboratory Report (cont.)

RJ Lee Group Job No: BAK307038  
Client Job No: 101323 1.1/Mannheim Amer.  
High School HE 3411

RJLG Sample Number	Client Sample Number	Homogeneous	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst	Analysis Date
2622285.HPL Description: Tan Ceiling Tile	0703-MAH-129A	Yes	ND	90 CE, 3 FG	7 %	B, M	AKB	7/21/2003
2622286.HPL Description: Tan Ceiling Tile	0703-MAH-129B	Yes	ND	90 CE, 3 FG	7 %	B, M	AKB	7/21/2003
2622287.HPL Description: Tan Ceiling Tile	0703-MAH-129C	Yes	ND	90 CE, 3 FG	7 %	B, M	AKB	7/21/2003
2622288.HPL Description: Tan Gasket	0703-MAH-130A	Yes	70 CH	-	30 %	B, M	AKB	7/21/2003
2622289.HPL Description: Tan Gasket	0703-MAH-130B	Yes	70 CH	-	30 %	B, M	AKB	7/21/2003
2622290.HPL Description: Tan Gasket	0703-MAH-130C	Yes	70 CH	-	30 %	B, M	AKB	7/21/2003
2622291.HPL Description: Black Roofing Material	0703-MAH-131A	Yes	ND	20 CE, 10 SF	70 %	T, B, M	AKB	7/21/2003
2622292.HPL Description: Black Roofing Material	0703-MAH-131B	Yes	ND	20 CE, 10 SF	70 %	T, B, M	AKB	7/21/2003

## RJ Lee Group, Inc.

## Laboratory Report (cont.)

RJ Lee Group Job No: BAK307038  
Client Job No: 101323 1.1/Mannheim Amer.  
High School HE 3411

RJLG Sample Number	Client Sample Number	Homogeneous	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst	Analysis Date
2622293.HPL Description: Black Roofing Material	0703-MAH-131C	Yes	ND	25 CE, 5 SF	70 %	T, B, M	AKB	7/21/2003
2622294.HPL Description: Beige Drywall	0703-MAH-132A	Yes	ND	<1 CE, 5 FG	95 %	B, G, M	AKB	7/21/2003
2622295.HPL Description: Beige Drywall	0703-MAH-132B	Yes	ND	<1 CE, 5 FG	95 %	B, G, M	AKB	7/21/2003
2622296.HPL Description: Beige Drywall	0703-MAH-132C	Yes	ND	<1 FG	100 %	B, G, M	AKB	7/21/2003
2622297.HPL Description: Beige Gasket	0703-MAH-133A	Yes	80 CH	-	20 %	B, M	AKB	7/21/2003
2622298.HPL Description: Beige Gasket	0703-MAH-133B	Yes	50 CH	<1 CE, <1 FG	50 %	B, M	AKB	7/21/2003
2622299.HPL Description: Beige Gasket	0703-MAH-133C	Yes	60 CH	-	40 %	B, M	AKB	7/21/2003
2622300.HPL Description: Tan Ceiling Tile	0703-MAH-134A	Yes	ND	90 CE, 5 FG	5 %	B, M	AKB	7/21/2003
2622301.HPL Description: Tan Ceiling Tile	0703-MAH-134B	Yes	ND	90 CE, 5 FG	5 %	B, M	AKB	7/21/2003

# RJ Lee Group, Inc.

## Laboratory Report (cont.)

RJ Lee Group Job No: BAK307038  
Client Job No: 101323 1.1/Mannheim Amer.  
High School HE 3411

RJLG Sample Number	Client Sample Number	Homogeneous	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst	Analysis Date
2622302.HPL Description: Tan Ceiling Tile	0703-MAH-134C	Yes	ND	90 CE, 5 FG	5 %	B, M	AKB	7/21/2003
2622303.HPL Description: Black Roofing Material	0703-MAH-135A	Yes	ND	10 CE, <1 FG, 10 SF	80 %	T, B, M	AKB	7/21/2003
2622304.HPL Description: Black Roofing Material	0703-MAH-135B	Yes	ND	10 CE, 10 SF	80 %	T, B, M	AKB	7/21/2003
2622305.HPL Description: Black Roofing Material	0703-MAH-135C	Yes	ND	10 CE, 10 SF	80 %	T, B, M	AKB	7/21/2003
2622306.HPL Description: Gray Floor Tile	0703-MAH-136A	Yes	3 CH	-	97 %	B, M	AKB	7/21/2003
2622307.HPL Description: Gray Floor Tile	0703-MAH-136B	Yes	3 CH	-	97 %	B, M	AKB	7/21/2003
2622308.HPL Description: Gray Floor Tile	0703-MAH-136C	Yes	3 CH	-	97 %	B, M	AKB	7/21/2003
2622309.HPL Description: Black Mastic	0703-MAH-137A	Yes	5 CH	-	95 %	B, M	AKB	7/21/2003
2622310.HPL Description: Black Mastic	0703-MAH-137B	Yes	5 CH	-	95 %	B, M	AKB	7/21/2003

# RJ Lee Group, Inc.

## Laboratory Report (cont.)

RJ Lee Group Job No: BAK307038  
Client Job No: 101323 1.1/Mannheim Amer.  
High School HE 3411

RJLG Sample Number	Client Sample Number	Homogeneous	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst	Analysis Date
2622311.HPL Description: Black Mastic	0703-MAH-137C	Yes	3 CH	<1 SF	97 %	B, M	AKB	7/21/2003
2622312.HPL Description: White Drywall	0703-MAH-138A	Yes	ND	5 CE	95 %	B, G, M	AKB	7/21/2003
2622313.HPL Description: White Drywall	0703-MAH-138B	Yes	ND	1 CE	99 %	B, G, M	AKB	7/21/2003
2622314.HPL Description: White Drywall	0703-MAH-138C	Yes	ND	1 CE	99 %	B, G, M	AKB	7/21/2003
2622315.HPL Description: White Joint Compound	0703-MAH-139A	Yes	ND	<1 CE	100 %	B, M	AKB	7/21/2003
2622316.HPL Description: White Joint Compound	0703-MAH-139B	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003
2622317.HPL Description: White Joint Compound	0703-MAH-139C	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003
2622318.HPL Description: White Adhesive	0703-MAH-140A	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003
2622319.HPL Description: White Adhesive	0703-MAH-140B	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003



# RJ Lee Group, Inc.

## Laboratory Report (cont.)

RJ Lee Group Job No: BAK307038  
Client Job No: 101323 1.1/Mannheim Amer.  
High School HE 3411

RJLG Sample Number	Client Sample Number	Homogeneous	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst	Analysis Date
2622320.HPL Description: White Adhesive	0703-MAH-140C	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003
2622321.HPL Description: Beige Ceiling Tile	0703-MAH-141A	Yes	ND	20 CE, 20 FG	60 %	P, B, M	AKB	7/22/2003
2622322.HPL Description: Beige Ceiling Tile	0703-MAH-141B	Yes	ND	20 CE, 20 FG	60 %	P, B, M	AKB	7/22/2003
2622323.HPL Description: Beige Ceiling Tile	0703-MAH-141C	Yes	ND	20 CE, 20 FG	60 %	P, B, M	AKB	7/22/2003
2622324.HPL Description: Olive Glue	0703-MAH-142A	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003
2622325.HPL Description: Olive Glue	0703-MAH-142B	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003
2622326.HPL Description: Olive Glue	0703-MAH-142C	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003
2622327.HPL Description: Gray Linoleum	0703-MAH-143A	Yes	ND	15 CE	85 %	B, M	AKB	7/22/2003
2622328.HPL Description: Gray Linoleum	0703-MAH-143B	Yes	ND	15 CE	85 %	B, M	AKB	7/22/2003

# RJ Lee Group, Inc.

## Laboratory Report (cont.)

RJ Lee Group Job No: BAK307038  
Client Job No: 101323 1.1/Mannheim Amer.  
High School HE 3411

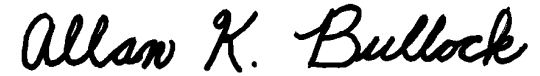
RJLG Sample Number	Client Sample Number	Homogeneous	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst	Analysis Date
2622329.HPL Description: Gray Linoleum	0703-MAH-143C	Yes	ND	15 CE	85 %	B, M	AKB	7/22/2003
2622330.HPL Description: Tan Linoleum	0703-MAH-144A	Yes	ND	15 CE	85 %	B, M	AKB	7/22/2003
2622331.HPL Description: Tan Linoleum	0703-MAH-144B	Yes	ND	15 CE	85 %	B, M	AKB	7/22/2003
2622332.HPL Description: Tan Linoleum	0703-MAH-144C	Yes	ND	15 CE	85 %	B, M	AKB	7/22/2003
2622334.HPL Description: Beige Adhesive	0703-MAH-145B	Yes	ND	-	100 %	B, M	AKB	7/22/2003
2622335.HPL Description: Beige Adhesive	0703-MAH-145C	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003
2622336.HPL Description: Black Adhesive	0703-MAH-146A	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003
2622337.HPL Description: Black Adhesive	0703-MAH-146B	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003
2622338.HPL Description: Black Adhesive	0703-MAH-146C	Yes	ND	<1 CE	100 %	B, M	AKB	7/22/2003

## RJ Lee Group, Inc.

## Laboratory Report (cont.)

RJ Lee Group Job No: BAK307038  
Client Job No: 101323 1.1/Mannheim Amer.  
High School HE 3411

RJLG Sample Number	Client Sample Number	Homogeneous	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst	Analysis Date
2622339.HPL Description: Tan Linoleum	0703-MAH-147A	Yes	ND	15 CE, 10 FG	75 %	B, M	AKB	7/22/2003
2622340.HPL Description: Tan Linoleum	0703-MAH-147B	Yes	ND	25 CE, 10 FG	65 %	B, M	AKB	7/22/2003
2622341.HPL Description: Tan Linoleum	0703-MAH-147C	Yes	ND	20 CE, 15 FG	65 %	B, M	AKB	7/22/2003
2622342.HPL Description: Green Caulking	0703-MAH-148A	Yes	3 CH	-	92 %	B, M	AKB	7/22/2003
2622343.HPL Description: Green Caulking	0703-MAH-148B	Yes	3 CH	-	94 %	B, M	AKB	7/22/2003
2622344.HPL Description: Green Caulking	0703-MAH-148C	Yes	5 CH	-	92 %	B, M	AKB	7/22/2003
2622333.HPL Description: Beige Adhesive	0703-MAH-145A	Yes	ND	-	100 %	B, M	AKB	7/22/2003



Authorized Signature

Allan K. Bullock, Microscopist

**ASBESTOS**

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole	HY = Hydromagnesite	Q = Quartz
B = Binder	M = Miscellaneous	T = Tar
CA = Carbonates	MI = Mica	V = Vermiculite
CL = Clay	OP = Opaque	
F = Feldspar	OR = Organic	
G = Gypsum	P = Perlite	

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 1%.  
PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 1% to 0.1 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions.  
No responsibility or liability is assumed for the manner in which these results are used or interpreted.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must include the entire document in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10884) facility.

**DEPARTMENT OF DEFENSE  
EDUCATION ACTIVITY  
ASBESTOS MANAGEMENT PROGRAM**

**2003  
Asbestos Management Plan**

**for**

**Mannheim American High School  
Mannheim-Kaefertal, Germany  
HE 3411**

**Prepared For:**

**Department of Defense Education Activity  
Logistics Division  
4040 North Fairfax Drive  
Arlington, Virginia 22203-1635**

**Prepared By:**

**Baker Environmental, Inc.  
Airside Business Park  
100 Airside Drive  
Moon Township, PA 15108**



**Under Contract With:**

**U.S. Army Corps of Engineers  
Transatlantic Programs Center  
Winchester, Virginia**

**ASBESTOS MANAGEMENT PLAN  
FOR  
MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE OF CONTENTS**

**IMPORTANT FOREWORD**

**SECTIONS**

- 1.0 INTRODUCTION
- 2.0 LOCAL EDUCATION AGENCY REPRESENTATIVE
- 3.0 ASBESTOS COORDINATOR (AC)
- 4.0 SUMMARY OF INSPECTION FINDINGS
- 5.0 RECOMMENDED MANAGEMENT ACTIONS
- 6.0 REMOVED ACM
- 7.0 PLANNED ACTIVITIES
- 8.0 NOTIFICATION OF EMPLOYEES AND BUILDING OCCUPANTS
- 9.0 EVALUATION OF RESOURCE REQUIREMENTS
- 10.0 MANDATORY RECORDS

**EXHIBIT**

- 8.1 Sample Notification Letter to Employees and Building Occupants

**TABLES**

- 4.1 ACM in Each Building
- 5.1 Recommended Management Actions for ACM
- 6.1 Listing of ACM
- 7.1 Area(s) Requiring Initial or Additional Cleaning

## **TABLE OF CONTENTS (cont.)**

### **TABLES (cont.)**

- 8.1 Notification Efforts Completed by Asbestos Coordinator
- 9.1 Recommended Inventory for Asbestos O&M Program Equipment
- 9.2 Estimated Resources for Recommended Management Actions
- 10.1 Air Sampling Record
- 10.2 Training Record
- 10.3 Periodic Surveillance Record
- 10.4 Cleaning Activities
- 10.5 Operations and Maintenance Activity Record
- 10.6 Major Asbestos Activities
- 10.7 Fiber Release Episodes Record

### **APPENDICES**

- A Management Planner Certificate
- B Copies of Asbestos-Related Activity Notification Documents
- C Air Samples - Laboratory Analysis Reports
- D Glossary
- E Abatement Item Listing
- F U.S. EPA Final Rule: Asbestos-Containing Materials in Schools

## IMPORTANT FOREWORD

The information presented herein, together with historical records for this location, satisfies the reporting requirements of the AHERA legislation and DODEA policy regarding Asbestos Management Plans.

**FOR A SUMMARY TABULATION OF WHERE ASBESTOS WAS FOUND, AND WHAT SHOULD BE DONE ABOUT IT, PLEASE REFER TO TABLE 5.1 PRINTED ON BLUE-TINTED PAPER.**

Please also note that not all building materials have been tested. Examples of this may be materials which are hidden from view, inaccessible, or where sampling would be destructive. **THEREFORE, THERE IS NO ASSURANCE THAT UNTESTED MATERIALS ARE ASBESTOS-FREE.**



## **1.0 INTRODUCTION**

This Asbestos Management Plan for Mannheim American High School is a result of the inspection conducted by Baker Environmental, Inc. (Baker). The Asbestos Management Plan should be used in combination with the 2003 AHERA Inspection Report and the Operations and Maintenance Manual.

This plan contains all of the elements described in the U.S. Environmental Protection Agency (EPA) Rule, "Asbestos-Containing Materials in Schools," 40 Code of Federal Regulations (CFR), Part 763. The EPA Rule was promulgated on October 30, 1987, as required by the Asbestos Hazard Emergency Response Act (AHERA) of 1986. This Asbestos Management Plan was developed by an EPA-accredited management planner and includes:

- A description of inspections and management actions;
- Recommendations;
- Names of accredited persons who performed required work; and
- A plan for inspection, periodic surveillance, and operations and maintenance.

Under AHERA, a Local Education Agency or "LEA" has numerous responsibilities. For the Department of Defense Dependents Schools (DODDS), the LEA is defined as "the governing authority of any school operated under the defense dependents' education system provided for under the Defense Dependents' Education Act of 1978." In accordance with DODEA's Asbestos Management Program Procedures (DS Manual 4800.3), the Asbestos Program Manager at DODEA headquarters will serve the function of the LEA. The LEA responsibilities include the following:

- Ensure that the activities of any persons who perform inspections, reinspections, and periodic surveillance, develop and update management plans, and develop and implement response actions, including operations and maintenance, are carried out in accordance with Subpart E of this part.
- Ensure that all custodial and maintenance employees are properly trained as required by Subpart E of AHERA (reference (b)) and other applicable Federal and/or State regulations (e.g., the Occupational Safety and Health Administration asbestos standard for construction, the EPA worker protection rule, or applicable State regulations).
- Ensure that workers and building occupants, or their legal guardians, are informed at least once each school year about inspections, response actions, and post-response action activities, including periodic reinspection and surveillance activities that are planned or in progress.
- Ensure that short-term workers (e.g., telephone repair workers, utility workers, or exterminators) who may come in contact with asbestos in a school are provided information regarding the locations of ACM and suspected ACM assumed to be ACM.
- Ensure that warning labels are posted in accordance with Part 763.95 of AHERA (reference (b)).
- Ensure that management plans are available for inspection and notification of such availability has been provided as specified in the management plan in Part 763.93(g) of AHERA (reference (b)).
- Designate an Asbestos Coordinator (AC) to ensure that requirements of the LEA are properly implemented at the local level. Principals are hereby designated as the AC for their facilities. For non-school facilities, the AC shall be the Administrative Manager of the unit.

- Ensure that the AC and/or their designated person receives adequate training to perform duties assigned under this section. Such training shall provide, as necessary, basic knowledge of:
  - Health effects of asbestos.
  - Detection, identification, and assessment of ACM.
  - Options for controlling ACM.
  - Asbestos management programs.
  - Relevant Federal and State regulations concerning asbestos, including those in this Subpart E and those of the Occupational Safety and Health Administration, U.S. Department of Labor, the U.S. Department of Transportation and the U.S. Environmental Protection Agency.
- Ensure that the presence of ACM in a DODEA building is considered before initiating repair, maintenance, or construction projects.
- Provide timely notifications of fiber releases to all appropriate DODEA personnel, employee representative organizations, base command, and parents.

## **2.0 LOCAL EDUCATION AGENCY REPRESENTATIVE**

The LEA Representative designated by the Department of Defense Education Activity (DODEA) to ensure that the general LEA responsibilities described in Title 40 CFR, Part 763.84, are carried out is:

Ms. Liisa M. White  
Department of Defense Education Activity  
Logistics Division/Facilities Branch  
4040 North Fairfax Drive  
Arlington, VA 22203-1635  
(703) 696-3850 (ext. 1801)  
(703) 696-4030 (Fax)

This individual is qualified to perform the duties assigned to the LEA Representative as described in Title 40 CFR, Part 763.

### **LEA Certification**

As the LEA Representative, I certify that responsibilities as stipulated by Title 40 CFR, Section 763.84, have been met or will be met to the extent feasible and in a manner consistent with national security.



---

Liisa M. White

### 3.0 ASBESTOS COORDINATOR (AC)

The current Asbestos Coordinator (AC) designated to carry out the duties of the LEA at Mannheim American High School is:

Mr. Eric Goldman  
Mannheim American High School  
Unit 29939  
APO AE 09086

Telephone: 49-621-722261  
Telefax: 49-621-734901

According to asbestos management program procedures described in DODEA's DS Manual 4800.3, Section D, Paragraph 3:

"The AC will assume the duties directly or may delegate the duties to a staff employee at the local level; however, the AC retains the responsibility and accountability for implementation of the asbestos program at the local level."

If the above named AC has delegated responsibilities, please insert information below:

Name	Signature	Timeframe

#### **4.0 SUMMARY OF INSPECTION FINDINGS**

The 2003 AHERA Inspection (2003 inspection) of Mannheim American High School was conducted on 9-14 July 2003. Table 4.1 following this page summarizes the findings concerning the presence of ACM in each building.

Detailed results of the 2003 inspection, sample locations, ACM condition assessments, sample analysis, and inspector accreditation credentials are included in the 2003 AHERA Inspection Report for Mannheim American High School. A copy of this report was included with this Asbestos Management Plan when it was submitted to Mr. Eric Goldman.

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 4.1 - ACM IN EACH BUILDING**

<b>BUILDING NUMBER</b>	<b>HOMO. MATERIAL NUMBER</b>	<b>MATERIAL TYPE (MATERIAL DESCRIPTION)</b>	<b>MATERIAL LOCATION(S)</b>
0286 (Unknown)	004	SHEET GASKET (2" - 6" DIAMETER, RED, ON PIPE FLANGE CONNECTIONS)	ART SUPPLY ROOM 2, HEAT EXCHANGER AREA, HVAC 1, HVAC 2 SUPPLY ROOM
0286 (Unknown)	005	VINYL FLOOR TILE (1' X 1' ORANGE WITH RED STREAKS)	100, 105, 106
0286 (Unknown)	006	CEMENT DUCT (18" X 18" X 36" GRAY, FLUE PIPE)	100, 105, 106, 200, 207, 208
0286 (Unknown)	007	VINYL FLOOR TILE (1' X 1' BEIGE)	102, 212A, 214A
0286 (Unknown)	026	CEMENT WALL PANELS (3' X 8' WHITE)	116, 116A
0286 (Unknown)	032	VINYL FLOOR TILE (10" X 10" BEIGE)	126, 127, 128, 129, 130, 223, 224, 225, 227
0286 (Unknown)	035	CEMENT WALL PANELS (GRAY, DEFLECTOR PANEL BOARD)	ROOF
0286 (Unknown)	038	CEMENT WALL PANELS (4' X 8' WHITE)	110, 110A, 112
0286 (Unknown)	046	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' ORANGE WITH RED STREAKS VINYL FLOOR TILE)	100, 105, 106
0286 (Unknown)	047	FLOOR ADHESIVE (BLACK, UNDER 10" X 10" BEIGE VINYL FLOOR TILE)	126, 127, 128, 129, 130, 223, 224, 225, 227
0286 (Unknown)	084	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' WHITE WITH BLUE AND BLACK STREAKS VINYL FLOOR TILE)	216
0286 (Unknown)	089	FLOOR ADHESIVE (BLACK, UNDER 9" X 9" GRAY VINYL FLOOR TILE)	CORRIDOR D, 109, 110, 110A, 110C, 1 116, 116A, 116B, 211
0286 (Unknown)	090	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' GRAY WITH BLACK STREAKS VINYL FLOOR TILE)	111, 111B, 111C
0286 (Unknown)	091	FLOOR ADHESIVE (BLACK, UNDER 9" X 9" RED WITH WHITE AND BLACK STREAKS VINYL FLOOR TILE)	218A
0286 (Unknown)	133	SHEET GASKET (2" - 6" DIAMETER, GRAY, ON PIPE FLANGE CONNECTIONS)	HEAT EXCHANGER AREA

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 4.1 - ACM IN EACH BUILDING**


<b>BUILDING NUMBER</b>	<b>HOMO. MATERIAL NUMBER</b>	<b>MATERIAL TYPE (MATERIAL DESCRIPTION)</b>	<b>MATERIAL LOCATION(S)</b>
0286 (Unknown)	136	VINYL FLOOR TILE (10" X 10" WHITE WITH BLACK STREAKS)	STORAGE 5
0286 (Unknown)	137	FLOOR ADHESIVE (BLACK, UNDER 10" X 10" WHITE WITH BLACK STREAKS VINYL FLOOR TILE)	STORAGE 5
0736 (Unknown)	055	SHEET GASKET (2" - 6" DIAMETER, BLACK, ON PIPE FLANGE CONNECTIONS)	BALCONY 2, BOILER ROOM
0736 (Unknown)	130	SHEET GASKET (2" - 6" DIAMETER, RED, ON PIPE FLANGE CONNECTIONS)	BOILER ROOM
0746 (Unknown)	003	VINYL FLOOR TILE (9" X 9" BLUE)	B4, B4A, B5
0746 (Unknown)	008	VINYL FLOOR TILE (9" X 9" BLACK WITH WHITE STREAKS)	DARKROOM
0746 (Unknown)	053	FIRE DOOR LINING (WHITE, ENCLOSED IN METAL)	B4
0746 (Unknown)	055	CEMENT WALL PANELS (BLACK CEMENT)	B5
0746 (Unknown)	070	FLOOR ADHESIVE (YELLOW, UNDER 9" X 9" BLACK WITH WHITE STREAKS VINYL FLOOR TILE)	DARKROOM
0746 (Unknown)	148	CAULK (GRAY)	B4



## **5.0 RECOMMENDED MANAGEMENT ACTIONS**

### **5.1 Management Planner**

The recommended management actions for each ACM or assumed ACM are presented in Table 5.1. These recommendations were prepared by the Baker Management Planner identified below:

---

Jeffrey C. Kolich

The Management Planner became accredited by successfully completing an EPA-approved course developed under Section 206(c) of Title II of the Toxic Substances Control Act. A copy of the Management Planner's accreditation certificate is located in Appendix A.

Table 5.1 includes blank Begin Date and End Date columns. These columns were included to assist the AC in documenting implementation of recommended management actions. Upon satisfactory completion of each management action, the AC will record the date in the appropriate space on Table 5.1 and forward a copy of the page to the Area Office.

### **5.2 Reasons for Selecting Management Actions**

The rationale for selecting the management actions recommended in this report is based on guidelines presented in the EPA Rule "Asbestos-Containing Materials in Schools" and DODEA policy. The rationale is as follows:

- Significantly damaged surfacing material and miscellaneous material is likely to release asbestos fibers into the air; therefore, these material(s) should be removed and replaced with material(s) that do not contain asbestos, or encapsulated or enclosed if such action would be feasible and sufficient to protect human health and the environment.

- Damaged surfacing material and miscellaneous material may release asbestos fibers into the air; therefore, the damaged areas should be immediately repaired. If repair of the damaged area(s) is not feasible, the material should be removed and replaced with a material that does not contain asbestos, or encapsulated or enclosed if such action would be feasible and sufficient to protect human health and the environment.
- Damaged or significantly damaged thermal system insulation may release asbestos fibers into the air; therefore, the damaged areas should be repaired to inhibit asbestos fiber release. After these repairs are completed, the insulation should be maintained in an intact state and undamaged condition or removed and replaced with a material that does not contain asbestos. If repair of the damaged areas is not feasible, the material should be removed.
- ACM with a potential for damage, including thermal system insulation, surfacing material, or miscellaneous material, may release asbestos fibers into the air if damaged; therefore, the material should be properly maintained in accordance with an operations and maintenance program or removed and replaced with a material that does not contain asbestos.
- ACM with a potential for significant damage, including thermal system insulation, surfacing material, or miscellaneous material, is likely to release asbestos fibers into the air if damaged significantly; therefore, preventive measures should be taken to ensure that the material will not become significantly damaged. An operations and maintenance program should be implemented, or the material should be enclosed or encapsulated or removed and replaced as soon as possible with a material that does not contain asbestos.
- Any ACM, regardless of condition, that may be disturbed by any planned action such as maintenance, installation, and construction, or any other modification to the building, must be removed prior to conducting the planned action.

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS FOR ACM**

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	FRI- ABLE	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)	BEGIN DATE	END DATE
0286 (Unknown)	004	SHEET GASKET (2" - 6" DIAMETER, RED, ON PIPE FLANGE CONNECTIONS)	NO	ART SUPPLY ROOM 2, HEAT EXCHANGER AREA, HVAC 1, HVAC 2, SUPPLY ROOM		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.		
0286 (Unknown)	005	VINYL FLOOR TILE (1' X 1' ORANGE WITH RED STREAKS)	NO	100, 105, 106	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #046. THIS MATERIAL IS LOCATED BELOW THE EXISTING FLOORING MATERIAL.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.		
0286 (Unknown)	006	CEMENT DUCT (18" X 18" X 36" GRAY, FLUE PIPE)	NO	100, 105, 106, 200, 207, 208		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.		
0286 (Unknown)	007	VINYL FLOOR TILE (1' X 1' BEIGE)	NO	102, 212A, 214A	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #075.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.		
0286 (Unknown)	026	CEMENT WALL PANELS (3' X 8' WHITE)	NO	116, 116A		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.		
0286 (Unknown)	032	VINYL FLOOR TILE (10" X 10" BEIGE)	NO	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #047.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.		
0286 (Unknown)	035	CEMENT WALL PANELS (GRAY, DEFLECTOR PANEL BOARD)	NO	ROOF		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.		

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS FOR ACM**

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	FRI- ABLE	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)	BEGIN DATE	END DATE
0286 (Unknown)	038	CEMENT WALL PANELS (4' X 8' WHITE)	NO	110, 110A, 112		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		
0286 (Unknown)	046	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' ORANGE WITH RED STREAKS VINYL FLOOR TILE)	NO	100, 105, 106	THIS IS THE ADHESIVE FOR MATERIAL #005.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		
0286 (Unknown)	047	FLOOR ADHESIVE (BLACK, UNDER 10" X 10" BEIGE VINYL FLOOR TILE)	NO	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	THIS IS THE ADHESIVE FOR MATERIAL #032.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		
0286 (Unknown)	084	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' WHITE WITH BLUE AND BLACK STREAKS VINYL FLOOR TILE)	NO	216	THIS IS THE ADHESIVE FOR MATERIAL #023.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		
0286 (Unknown)	089	FLOOR ADHESIVE (BLACK, UNDER 9" X 9" GRAY VINYL FLOOR TILE)	NO	CORRIDOR D, 109, 110, 110A, 110C, 113A, 116, 116A, 116B, 211	THIS IS THE ADHESIVE FOR MATERIAL #022. SIX SF OF THIS MATERIAL ARE EXPOSED AND NEED TO BE REPAIRED.	<ol style="list-style-type: none"> <li>1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT.</li> <li>2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS.</li> <li>3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED.</li> <li>4. CONSULT THE O &amp; M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL.</li> <li>5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS FOR ACM**

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	FRI-ABLE	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)	BEGIN DATE	END DATE
0286 (Unknown)	090	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' GRAY WITH BLACK STREAKS VINYL FLOOR TILE)	NO	111, 111B, 111C	THIS IS THE ADHESIVE FOR MATERIAL #025.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		
0286 (Unknown)	091	FLOOR ADHESIVE (BLACK, UNDER 9" X 9" RED WITH WHITE AND BLACK STREAKS VINYL FLOOR TILE)	NO	218A	THIS IS THE ADHESIVE FOR MATERIAL #037.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		
0286 (Unknown)	133	SHEET GASKET (2" - 6" DIAMETER, GRAY, ON PIPE FLANGE CONNECTIONS)	NO	HEAT EXCHANGER AREA		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		
0286 (Unknown)	136	VINYL FLOOR TILE (10" X 10" WHITE WITH BLACK STREAKS)	NO	STORAGE 5	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #137. THREE SF OF THIS MATERIAL ARE DAMAGED AT THE DOORWAY AND NEED TO BE REPAIRED.	<ol style="list-style-type: none"> <li>1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT.</li> <li>2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS.</li> <li>3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED.</li> <li>4. CONSULT THE O &amp; M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL.</li> <li>5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		
0286 (Unknown)	137	FLOOR ADHESIVE (BLACK, UNDER 10" X 10" WHITE WITH BLACK STREAKS VINYL FLOOR TILE)	NO	STORAGE 5	THIS IS THE ADHESIVE FOR MATERIAL #136.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS FOR ACM**

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	FRI- ABLE	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)	BEGIN DATE	END DATE
0736 (Unknown)	055	SHEET GASKET (2" - 6" DIAMETER, BLACK, ON PIPE FLANGE CONNECTIONS)	NO	BALCONY 2, BOILER ROOM		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		
0736 (Unknown)	130	SHEET GASKET (2" - 6" DIAMETER, RED, ON PIPE FLANGE CONNECTIONS)	NO	BOILER ROOM		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		
0746 (Unknown)	003	VINYL FLOOR TILE (9" X 9" BLUE)	NO	B4, B4A, B5	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #080. 13 SF OF THIS MATERIAL ARE DAMAGED AND NEED TO BE REPAIRED IN ROOMS B4 AND B5.	<ol style="list-style-type: none"> <li>1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT.</li> <li>2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS.</li> <li>3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED.</li> <li>4. CONSULT THE O &amp; M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL.</li> <li>5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		
0746 (Unknown)	008	VINYL FLOOR TILE (9" X 9" BLACK WITH WHITE STREAKS)	NO	DARKROOM	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #070. SIX SF OF THIS MATERIAL ARE DAMAGED AND NEED TO BE REPAIRED.	<ol style="list-style-type: none"> <li>1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT.</li> <li>2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS.</li> <li>3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED.</li> <li>4. CONSULT THE O &amp; M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL.</li> <li>5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>		

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS FOR ACM**

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	FRI- ABLE	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)	BEGIN DATE	END DATE
0746 (Unknown)	053	FIRE DOOR LINING (WHITE, ENCLOSED IN METAL)	NO	B4	THERE ARE 3 SINGLE DOORS AND 1 DOUBLE DOOR (2 EACH).	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.		
0746 (Unknown)	055	CEMENT WALL PANELS (BLACK CEMENT)	NO	B5		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.		
0746 (Unknown)	070	FLOOR ADHESIVE (YELLOW, UNDER 9" X 9" BLACK WITH WHITE STREAKS VINYL FLOOR TILE)	NO	DARKROOM	THIS IS THE ADHESIVE FOR MATERIAL #008.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.		
0746 (Unknown)	148	CAULK (GRAY)	NO	B4	THIIS MATERIAL IS LOCATED AROUND THE DOORS LEADING TO STORAGE 1 AND STORAGE 2.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.		

## **6.0 REMOVED ACM**

When removal management actions have been initiated, the AC should provide a written account of any identified ACM that has been removed from the location. This written account must be updated as removal management actions are completed. Table 6.1 lists the ACM determined to be remaining at Mannheim American High School at the completion of the 2003 inspection. The AC should update Table 6.1 each time a removal management action is completed by documenting the date the action was completed. A copy of the updated Table 6.1 should be forwarded to the Area Office.



**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 6.1 - LISTING OF ACM**

<b>BUILDING NUMBER</b>	<b>HOMO. MTRL. NO.</b>	<b>MATERIAL TYPE</b>	<b>MATERIAL LOCATION(S)</b>	<b>MATERIAL QUANTITY</b>
0286 (Unknown)	004	SHEET GASKET	ART SUPPLY ROOM 2, HEAT EXCHANGER AREA, HVAC 1, HVAC 2, SUPPLY ROOM	90 EA
0286 (Unknown)	005	VINYL FLOOR TILE	100, 105, 106	2,240 SF
0286 (Unknown)	006	CEMENT DUCT	100, 105, 106, 200, 207, 208	28 LF
0286 (Unknown)	007	VINYL FLOOR TILE	102, 212A, 214A	312 SF
0286 (Unknown)	026	CEMENT WALL PANELS	116, 116A	480 SF
0286 (Unknown)	032	VINYL FLOOR TILE	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	4,320 SF
0286 (Unknown)	035	CEMENT WALL PANELS	ROOF	90 SF
0286 (Unknown)	038	CEMENT WALL PANELS	110, 110A, 112	576 SF
0286 (Unknown)	046	FLOOR ADHESIVE	100, 105, 106	2,240 SF
0286 (Unknown)	047	FLOOR ADHESIVE	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	4,320 SF
0286 (Unknown)	084	FLOOR ADHESIVE	216	836 SF
0286 (Unknown)	089	FLOOR ADHESIVE	CORRIDOR D, 109, 110, 110A, 110C, 113A, 116, 116A, 116B, 211	6,225 SF
0286 (Unknown)	090	FLOOR ADHESIVE	111, 111B, 111C	886 SF
0286 (Unknown)	091	FLOOR ADHESIVE	218A	80 SF
0286 (Unknown)	133	SHEET GASKET	HEAT EXCHANGER AREA	35 EA
0286 (Unknown)	136	VINYL FLOOR TILE	STORAGE 5	700 SF
0286 (Unknown)	137	FLOOR ADHESIVE	STORAGE 5	700 SF
0736 (Unknown)	055	SHEET GASKET	BALCONY 2, BOILER ROOM	54 EA
0736 (Unknown)	130	SHEET GASKET	BOILER ROOM	14 EA
0746 (Unknown)	003	VINYL FLOOR TILE	B4, B4A, B5	3,575 SF
0746 (Unknown)	008	VINYL FLOOR TILE	DARKROOM	75 SF
0746 (Unknown)	053	FIRE DOOR LINING	B4	5 EA
0746 (Unknown)	055	CEMENT WALL PANELS	B5	1,550 SF
0746 (Unknown)	070	FLOOR ADHESIVE	DARKROOM	75 SF

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 6.1 - LISTING OF ACM**

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE	MATERIAL LOCATION(S)	MATERIAL QUANTITY
0746 (Unknown)	148	CAULK	B4	34 LF

## **7.0 PLANNED ACTIVITIES**

### **7.1 Plan for Reinspection**

Within three years of the effective date of this Asbestos Management Plan and triennially thereafter, all known or assumed ACM remaining in each building still used by DODDS should be reinspected by an accredited inspector. The purpose of the reinspection is to reassess any ACM remaining in each building. The reinspection will be performed in accordance with Title 40 CFR, Section 763.85(b), and a record of the reinspection will be incorporated into the Asbestos Management Plan within 90 days of the reinspection and will contain the following information:

- Date of the reinspection
- Changes in the condition of known or assumed ACM
- Locations where samples were collected
- Assessments or reassessments of friable ACM
- Signature(s) and certification(s) of inspector(s)

### **7.2 Plan for Operations and Maintenance**

The Operations and Maintenance (O&M) Program has been developed for Mannheim American High School for implementation by building maintenance and custodial staff. The O&M Program is described in detail in the O&M Manual. A copy of the O&M Manual was attached to this Asbestos Management Plan when it was transmitted to Mr. Eric Goldman. The O&M Program includes:

- Procedures for initial and additional cleaning of areas where friable ACM is located.
- Procedures to protect building occupants during operations and maintenance activities disturbing friable and nonfriable ACM.
- Procedures to follow if friable ACM is dislodged and fibers are released.

### **7.3 Plan for Periodic Surveillance**

Within six months of the effective date of this Asbestos Management Plan, and at least once every six months thereafter, a qualified person will visually inspect all identified known or assumed ACM. Periodic surveillance involves a visual inspection to note changes in condition. A record of the surveillance, including the date and any changes in the condition of materials, will be maintained by the AC and submitted to the Area Office. The periodic surveillance records are located in Section 10, Table 10.3, of this Asbestos Management Plan.

### **7.4 Recommendations for Initial and Additional Cleaning**

The following initial and additional cleaning practices should be instituted:

- Initial cleaning. Unless the building has been cleaned using equivalent methods within the previous six months, all areas of a school building where friable ACM, damaged or significantly damaged thermal system insulation ACM, or friable assumed ACM are present shall be cleaned before the initiation of any management action, other than O&M activities or repair, according to the following procedures:
  - ▶ High efficiency particulate air (HEPA)-vacuum and steam-clean all carpets.
  - ▶ HEPA-vacuum or wet-clean all other floors and all other horizontal surfaces.
  - ▶ Dispose of all debris, filters, mopheads, and cloths in sealed, leakproof containers.
- Additional cleaning. Unless initial cleaning has been accomplished within the previous six months, all areas of a building where friable damaged or significantly damaged ACM, damaged or significantly damaged asbestos-containing thermal system insulation, or friable damaged or significantly damaged assumed ACM are present, shall be cleaned. Cleaning methods used shall be equivalent to initial cleaning practices.

Table 7.1 identifies the areas requiring initial or additional cleaning as described in the O&M Manual.

**Mannheim American High School  
HE 3411**

**Table 7.1 Area(s) Requiring Initial or Additional Cleaning**

**THERE ARE NO AREAS WHICH REQUIRE INITIAL OR ADDITIONAL CLEANING IN  
THIS FACILITY**

## **8.0 NOTIFICATION OF EMPLOYEES AND BUILDING OCCUPANTS**

Information concerning inspections, reinspections, management actions, and post management action activities (e.g., surveillance activities) must be provided to employees and building occupants (or their legal guardians) on an annual basis. Exhibit 8.1 is a sample notification letter. The AC must maintain a record of all notification efforts that have been undertaken. The notification record is contained in Table 8.1. The AC must update this record after each annual notification. Copies of notification letters and any additional public information issued by the AC will be inserted into Appendix B of this Asbestos Management Plan. The AC will forward copies of the documents to the Area Office.

**EXHIBIT 8.1**  
**SAMPLE NOTICE FOR AHERA INSPECTION OR REINSPECTION**

(Letterhead)  
(Date)

MEMORANDUM FOR PARENTS AND STAFF

SUBJECT: Notification of AHERA inspection (or reinspection)

As required by the Asbestos Hazard Emergency Response Act (AHERA) of 1986, our buildings have been inspected or reinspected for asbestos-containing materials (ACM). The most recent inspection was conducted on **[take date from most recent Asbestos Management Report]** in accordance with Environmental Protection Agency (EPA) regulations and DoDEA policy.

The results of the inspection or reinspection indicate we have the following asbestos materials in our building(s): **[refer to table 6.1 of the Asbestos Management Plan addendum]**

**THE FOLLOWING ITALICIZED TEXT IS AN EXAMPLE OF HOW TO PRESENT THE INFORMATION:**

- *vinyl floor tiles in the administrative offices, teachers' lounge, and first floor classrooms and hallways of Bldg 2001,*
- *insulation on steam pipes in the boiler room of Bldg 2002,*
- *cement roof panels on the walkway between Bldgs 2001 and 2002.*

*The insulation on the steam pipes has been recommended for removal. Project specifications are being prepared and the project is expected to be completed during the summer recess.*

*The cement roof panels were removed during the exterior renovations over the summer recess this year. The inspectors found the vinyl floor tiles to be in good condition and indicated that there is no reason to remove them at this time.*

As required by EPA, a periodic surveillance program is in effect for asbestos materials that remain in place and their condition will be closely monitored.

A copy of the Asbestos Management Plan is kept in our office and is available for your review. If you have any questions or concerns, please do not hesitate to contact me.

John Q. Smith  
Principal

**Mannheim American High School  
HE 3411**

**Table 8.1  
Notification Efforts Completed by Asbestos Coordinator**

Date	Activity	Notification To	Notification By	Comments



## 9.0 EVALUATION OF RESOURCE REQUIREMENTS

### 9.1 O&M Program Supplies

The cleaning and preventive measures specified in this Asbestos Management Plan require the availability of disposable and non-disposable items. Table 9.1 lists the recommended equipment inventory required for use in asbestos management activities. This equipment must be available for use by properly trained maintenance and custodial staff.

**Table 9.1**  
**Recommended Inventory for**  
**Asbestos O&M Program Equipment**

Item	Quantity	Unit Cost	Total Estimated Cost
"Danger Asbestos" Labeled Bags 75/Roll	1	\$52.00/Roll	\$52.00
6 mil Polyethylene Sheeting 10' X 100' Roll	1	\$29.00/Roll	\$29.00
Bridging Encapsulant 5 Gal Container	1	\$188.00/Container	\$188.00
Duct Tape 10/Box	1	\$55.00/Box	\$55.00
Garden Sprayer	1	\$30.00/Sprayer	\$30.00
Half Face Respirators	2	\$23.00/Respirator	\$46.00
HEPA Filter Vacuum	1	\$1,030.00/Vacuum	\$1,030.00
P100 Respirator Cartridges 10/Box	1	\$42.00/Box	\$42.00
Signs and Placards	1	\$60.00/Set	\$60.00
Tyvek Suits 25/Box	1	\$110.00/Box	\$110.00

## **9.2     Resource Requirements for Management Actions**

Table 9.2 defines the estimated resources required to carry out the recommended management actions for all homogeneous areas found to contain ACM.

To assist in understanding the information provided in Table 9.2, a description of each column heading is included below.

**BUILDING NUMBER** - Identifies each building included in the report. If the date of construction was known, this information is presented in parenthesis after the building number.

**HOMO. MATRL. NO. (Homogeneous Material Number)** - Numerical designation assigned to each homogeneous material (material that is uniform in color and texture, serves the same function, and was installed at the same time) encountered in a building.

**MATERIAL TYPE** - Brief description of the material, followed by information on distinguishing characteristics which may include function, size, color, shape, etc., if necessary.

**MATERIAL LOCATION(S)** - Short description detailing the specific location of the homogeneous material area.

**ABATEMENT ITEM** - Numerical designation assigned to each item required to carry out the management action. Appendix E contains an Abatement Item Listing providing a detailed description of each abatement item.

**UNIT COST** - Estimated unit cost associated with each abatement item. Appendix E contains an Abatement Item Listing providing an estimated unit cost for each abatement item.

**ESTIMATED QUANTITY** - Estimated quantity of the abatement item required to perform the task.

**ITEM COST** - Management action cost obtained by multiplying UNIT COST by ESTIMATED QUANTITY.

**ESTIMATED MATERIAL COST** - Estimated total cost for each asbestos material obtained by adding all ITEM COSTS for each material.

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 9.2 - ESTIMATED RESOURCES FOR RECOMMENDED MANAGEMENT ACTIONS**

BUILDING NUMBER	HOMO. MATERIAL NUMBER	MATERIAL TYPE	MATERIAL LOCATION(S)	ABATEMENT ITEM	UNIT COST	ESTIMATED QUANTITY	ITEM COST	ESTIMATED MATERIAL COST
0286 (Unknown)	004	SHEET GASKET	ART SUPPLY ROOM 2, HEAT EXCHANGER AREA, HVAC 1, HVAC 2, SUPPLY ROOM	200	\$67.50	1.50 HRS	\$101.25	\$101.25
0286 (Unknown)	005	VINYL FLOOR TILE	100, 105, 106	200	\$67.50	15.00 HRS	\$1,012.50	\$1,012.50
0286 (Unknown)	006	CEMENT DUCT	100, 105, 106, 200, 207, 208	200	\$67.50	1.50 HRS	\$101.25	\$101.25
0286 (Unknown)	007	VINYL FLOOR TILE	102, 212A, 214A	200	\$67.50	6.00 HRS	\$405.00	\$405.00
0286 (Unknown)	026	CEMENT WALL PANELS	116, 116A	200	\$67.50	3.00 HRS	\$202.50	\$202.50
0286 (Unknown)	032	VINYL FLOOR TILE	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	200	\$67.50	18.00 HRS	\$1,215.00	\$1,215.00
0286 (Unknown)	035	CEMENT WALL PANELS	ROOF	200	\$67.50	0.60 HRS	\$40.50	\$40.50
0286 (Unknown)	038	CEMENT WALL PANELS	110, 110A, 112	200	\$67.50	4.50 HRS	\$303.75	\$303.75
0286 (Unknown)	046	FLOOR ADHESIVE	100, 105, 106	200	\$67.50	15.00 HRS	\$1,012.50	\$1,012.50
0286 (Unknown)	047	FLOOR ADHESIVE	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	200	\$67.50	18.00 HRS	\$1,215.00	\$1,215.00
0286 (Unknown)	084	FLOOR ADHESIVE	216	200	\$67.50	9.00 HRS	\$607.50	\$607.50

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 9.2 - ESTIMATED RESOURCES FOR RECOMMENDED MANAGEMENT ACTIONS**

BUILDING NUMBER	HOMO. MATERIAL NUMBER	MATERIAL TYPE	MATERIAL LOCATION(S)	ABATEMENT ITEM	UNIT COST	ESTIMATED QUANTITY		ITEM COST	ESTIMATED MATERIAL COST
0286 (Unknown)	089	FLOOR ADHESIVE	CORRIDOR D, 109, 110, 110A, 110C, 113A, 116, 116A, 116B, 211	100	\$129.15	1.00	HRS	\$129.15	\$1,749.15
				200	\$67.50	24.00	HRS	\$1,620.00	
0286 (Unknown)	090	FLOOR ADHESIVE	111, 111B, 111C	200	\$67.50	9.00	HRS	\$607.50	\$607.50
0286 (Unknown)	091	FLOOR ADHESIVE	218A	200	\$67.50	1.50	HRS	\$101.25	\$101.25
0286 (Unknown)	133	SHEET GASKET	HEAT EXCHANGER AREA	200	\$67.50	1.50	HRS	\$101.25	\$101.25
0286 (Unknown)	136	VINYL FLOOR TILE	STORAGE 5	100	\$129.15	1.00	HRS	\$129.15	\$736.65
				200	\$67.50	9.00	HRS	\$607.50	
0286 (Unknown)	137	FLOOR ADHESIVE	STORAGE 5	200	\$67.50	9.00	HRS	\$607.50	\$607.50
0736 (Unknown)	055	SHEET GASKET	BALCONY 2, BOILER ROOM	200	\$67.50	1.50	HRS	\$101.25	\$101.25
0736 (Unknown)	130	SHEET GASKET	BOILER ROOM	200	\$67.50	1.50	HRS	\$101.25	\$101.25
0746 (Unknown)	003	VINYL FLOOR TILE	B4, B4A, B5	100	\$129.15	2.00	HRS	\$258.30	\$1,473.30
				200	\$67.50	18.00	HRS	\$1,215.00	
0746 (Unknown)	008	VINYL FLOOR TILE	DARKROOM	100	\$129.15	1.00	HRS	\$129.15	\$230.40
				200	\$67.50	1.50	HRS	\$101.25	

**MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE 9.2 - ESTIMATED RESOURCES FOR RECOMMENDED MANAGEMENT ACTIONS**

BUILDING NUMBER	HOMO. MATERIAL NUMBER	MATERIAL TYPE	MATERIAL LOCATION(S)	ABATEMENT ITEM	UNIT COST	ESTIMATED QUANTITY	ITEM COST	ESTIMATED MATERIAL COST
0746 (Unknown)	053	FIRE DOOR LINING	B4	200	\$67.50	1.50 HRS	\$101.25	\$101.25
0746 (Unknown)	055	CEMENT WALL PANELS	B5	200	\$67.50	9.00 HRS	\$607.50	\$607.50
0746 (Unknown)	070	FLOOR ADHESIVE	DARKROOM	200	\$67.50	1.50 HRS	\$101.25	\$101.25
0746 (Unknown)	148	CAULK	B4	200	\$67.50	1.50 HRS	\$101.25	\$101.25
							<b>TOTAL COST</b>	<b>\$12,938.00</b>

## **10.0 MANDATORY RECORDS**

The EPA rule, "Asbestos-Containing Materials in Schools", Title 40 CFR, Part 763, requires that certain records be maintained in the administrative offices of the school and the LEA as part of the Asbestos Management Plan. For each area where ACM has been removed, the LEA will retain the required records for 3 years beyond the next reinspection. When records are updated, the AC will forward a copy of the updated record to the Area Office.

### **10.1 Preventive Measures and Management Actions**

The AC will maintain the required records by entering the appropriate information on Table 5.1 in Section 5.0 of this Asbestos Management Plan. Table 5.1 will be updated as the preventive measures management actions are completed.

Records of any air monitoring conducted in conjunction with the asbestos management program are documented on Table 10.1. Appendix C of this Asbestos Management Plan is reserved for copies of the laboratory analysis reports of any air samples collected.

### **10.2 Training**

A complete record of employee training is to be maintained on Table 10.2. As training is completed, the AC will record the appropriate information on Table 10.2.

### **10.3 Periodic Surveillance**

Each time periodic surveillance as defined under Title 40 CFR, Section 763.92(b), is performed, the AC will record in the appropriate spaces on Table 10.3 the name of the individual(s) conducting the surveillance activity, the location and date of the surveillance activity, and changes in the condition of the materials.

#### **10.4 Cleaning**

Each time cleaning activities as described under Title 40 CFR, Section 763.91(c), are performed, the AC will record in the appropriate spaces on Table 10.4, the material and cleaning methods used, the date of the cleaning, the locations cleaned, and the name of the individual(s) performing the cleaning.

#### **10.5 Operations and Maintenance**

Each time operations and maintenance activities involving ACM as defined under Title 40 CFR, Section 763.91(d), are performed in this school, the AC will record on Table 10.5 the name of the individual(s) performing the activity, the start and completion dates of the activity, the location where the activity occurred, a description of the activity, including preventive measures used, and, if ACM is removed, the name and location of the storage or disposal site of the ACM.

#### **10.6 Major Asbestos Activity**

Each time a major asbestos activity as defined under Title CFR, Section 763.91(e), is performed, the AC will record on Table 10.6 the name and signature, the State of accreditation, and, if applicable, the accreditation number of the individual(s) performing the activity, the start and completion dates, the location where the activity occurred, a description of the activity including preventive measures used, and, if ACM is removed, the name and location of the storage or disposal site of the ACM.

#### **10.7 Fiber Release Episodes**

For each asbestos fiber release episode as defined under Title 40 CFR, Section 763.91(f), the AC will record on Table 10.7 the date and location of the episode, the severity of release, the preventive measures or management actions taken, the name of the individual(s) performing the work, and the name and location of the storage or disposal site of any ACM removed.



**TABLE 10.1 AIR SAMPLING RECORD**

<b>Name/Signature of Sample Collector</b>	<b>Sample Location</b>	<b>Name/Address of Laboratory</b>	<b>Date of Analysis</b>	<b>Method of Analysis</b>	<b>Result</b>	<b>Analyst Name &amp; Title</b>

**TABLE 10.2 TRAINING RECORD**

*SCHOOL TO INSERT TRAINING RECORDS*

**TABLE 10.3 PERIODIC SURVEILLANCE RECORD**

<b>Material</b>	<b>Surveillance Date</b>	<b>Location</b>	<b>Previous Condition</b>	<b>Current Condition</b>	<b>Name of Inspector</b>

**TABLE 10.4 CLEANING ACTIVITIES**

<b>Material</b>	<b>Cleaning Date</b>	<b>Location Cleaned</b>	<b>Individual Performing Cleaning</b>

**TABLE 10.5 OPERATIONS AND MAINTENANCE ACTIVITY RECORD**

<b>Name of Person Conducting the Activity</b>	<b>Start Date</b>	<b>Completion Date</b>	<b>Activity Location</b>	<b>Activity Description</b>	<b>Storage or Disposal Site for ACM</b>

**TABLE 10.6 MAJOR ASBESTOS ACTIVITIES**

<b>Name and Signature</b>	<b>State of Accreditation</b>	<b>Start Date</b>	<b>Completion Date</b>	<b>Activity Location</b>	<b>Activity Description</b>	<b>Storage or Disposal Site for ACM</b>

**TABLE 10.7 FIBER RELEASE EPISODES RECORD**

<b>Location</b>	<b>Date</b>	<b>Major or Minor Release</b>	<b>Management Action or Preventive Measures</b>	<b>Individuals Performing Work</b>	<b>Storage or Disposal Site for ACM</b>

## **APPENDIX A**

### **MANAGEMENT PLANNER CERTIFICATE**



# Professional Training Associates, Inc.

## ASBESTOS MANAGEMENT PLANNER Initial Training Course

**Jeffrey C. Kolich**

has successfully completed the Asbestos Management Planner Initial Training Course and passed the course examination for purposes of accreditation under section 206 of Title II of the Toxic Substance Control Act (TSCA). Conducted by Professional Training Associates, Inc., 46 South Linden Street, Suite C, Duquesne, PA 15110, (412) 460-0266.

KOLICHJ  
MPI061903DUQUESN

Location: **Duquesne, PA**

Examination: **June 20, 2003**

Course Date: **June 19 - June 20, 2003**

Expiration: **June 20, 2004**

Course Director:

  
**John J. Curcio**

Certificate Number: **PTA 03 - 14 - 12067**

## **APPENDIX B**

### **COPIES OF ASBESTOS-RELATED ACTIVITY NOTIFICATION DOCUMENTS**

## **APPENDIX C**

### **AIR SAMPLES - LABORATORY ANALYSIS REPORTS**

## **APPENDIX D**

## **GLOSSARY**

## **GLOSSARY**

<b>Abatement</b>	Procedures which are implemented to remove asbestos materials from a damaged area, functional space, or a homogeneous area.
<b>Asbestos</b>	A group of naturally occurring minerals that can be separated into fibers which are flexible, heat resistant and chemically inert. The following asbestos minerals are used commercially: Actinolite, Amosite, Anthophyllite, Chrysotile, Crocidolite, and Tremolite.
<b>Asbestos-Containing Material (ACM)</b>	Per EPA regulations, any material that contains more than 1.0 percent asbestos by weight.
<b>Asbestos Coordinator (AC)</b>	The person at the local level who serves as a focal point or liaison for asbestos activities. Per DODEA Asbestos Management Policy, this person is the Principal of a school, or District Superintendent at a DSO.
<b>Asbestos Hazard Emergency Response Act (AHERA)</b>	An Act passed by Congress and signed by the President in October 1986 which requires the EPA to promulgate regulations requiring inspections for ACM, development of asbestos management plans, and management actions with respect to friable ACM in U.S. schools including DODDS.
<b>Asbestos Management Plan</b>	Required by AHERA, a plan detailing the steps taken to control potential asbestos hazards in school buildings.

**Asbestos Management Program**

A program instituted by DODEA to comply with AHERA and to administer long-term control and surveillance of all ACM in school buildings.

**Containment System**

A separation or barrier system that prevents the movement of asbestos-contaminated air from the abatement work area into uncontaminated areas.

**Encapsulation**

The treatment of ACM with a penetrating or surface sealant in order to minimize the potential for asbestos fiber release.

**Enclosure**

The system of containment that creates an airtight seal or barrier between the ACM and the adjacent space.

**EPA**

Environmental Protection Agency

**Friable**

Any material which, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure.

**Homogeneous Sampling Area**

An area of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color or texture, serves the same function, and was installed at the same time.

**Removal**

The removal of ACM from any surface or component in all or a portion of a building.

**Operations and Maintenance (O&M) Program**

A program specifically designed to clean up asbestos fibers previously released, to prevent the release of fibers by minimizing ACM disturbance or damage, and to monitor the condition of the ACM.

**Surveillance**

Periodic reinspection of friable and non-friable ACM on a frequency consistent with the requirements of the AHERA regulations.

**APPENDIX E**

**ABATEMENT ITEM LISTING**



**ABBREVIATIONS USED ON THE ABATEMENT ITEM LISTING:**

EA -- EACH

LF -- LINEAR FOOT

LS -- LUMP SUM

MH -- MAN HOUR

SF -- SQUARE FOOT

H -- HOUR

PR -- PAIR

### ABATEMENT ITEM LISTING

<u>Item Number</u>	<u>Item Description</u>	<u>Unit</u>	<u>Unit Price</u>
01	Removal and disposal of asbestos-containing vinyl floor tile. Removal by full containment method.	SF	\$26.50
02	Removal and disposal of asbestos-containing vinyl floor sheeting. Removal by full containment method.	SF	\$27.22
03	Removal and disposal of asbestos-containing floor adhesive. Removal by full containment method.	SF	\$26.50
04	Removal and disposal of asbestos-containing cement flooring. Removal by full containment method.	SF	\$33.70
05	Removal and disposal of asbestos-containing subfloor material. Removal by full containment method.	SF	\$32.98
06	Removal and disposal of asbestos-containing cove base adhesive. Removal by full containment method.	SF	\$26.50
07	Removal and disposal of asbestos-containing cove base. Removal by full containment method.	SF	\$26.50
10	Removal and disposal of asbestos-containing wall plaster. Removal by full containment method.	SF	\$30.10
11	Removal and disposal of asbestos-containing wallboard. Removal by full containment method.	SF	\$27.94
12	Removal and disposal of asbestos-containing cement wall panels. Removal by full containment method.	SF	\$28.66
13	Removal and disposal of asbestos-containing acoustical wall panels. Removal by full containment method.	SF	\$29.38
14	Removal and disposal of asbestos-containing fabric wall covering. Removal by full containment method.	SF	\$30.10
15	Removal and disposal of asbestos-containing paint. Removal by full containment method.	SF	\$30.10
16	Removal and disposal of asbestos-containing joint compound. Removal by full containment method.	SF	\$29.38

### ABATEMENT ITEM LISTING

<u>Item Number</u>	<u>Item Description</u>	<u>Unit</u>	<u>Unit Price</u>
17	Removal and disposal of asbestos-containing caulk. Removal by full containment method.	LF	\$31.90
18	Removal and disposal of asbestos-containing wall insulation. Removal by full containment method.	SF	\$27.58
19	Removal and disposal of asbestos-containing fireproofing. Removal by full containment method.	SF	\$31.18
20	Removal and disposal of asbestos-containing ceiling plaster. Removal by full containment method.	SF	\$30.82
21	Removal and disposal of asbestos-containing ceiling board. Removal by full containment method.	SF	\$30.82
22	Removal and disposal of asbestos-containing cement ceiling panels. Removal by full containment method.	SF	\$30.10
23	Removal and disposal of asbestos-containing ceiling tiles. Removal by full containment method.	SF	\$29.38
24	Removal and disposal of asbestos-containing ceiling insulation. Removal by full containment method.	SF	\$27.22
25	Removal and disposal of asbestos-containing ceiling rough finish. Removal by full containment method.	SF	\$31.54
26	Removal and disposal of asbestos-containing wall and ceiling plaster. Removal by full containment method.	SF	\$30.82
27	Removal and disposal of asbestos-containing cement wall and ceiling panels. Removal by full containment method.	SF	\$28.66
28	Removal and disposal of asbestos-containing wall and ceiling board. Removal by full containment method.	SF	\$29.02
29	Removal and disposal of asbestos-containing cement wall and ceiling tile. Removal by full containment method.	SF	\$30.10
30	Removal and disposal of asbestos-containing thermal pipe insulation. Removal by full containment method.	LF	\$36.58

### ABATEMENT ITEM LISTING

<u>Item Number</u>	<u>Item Description</u>	<u>Unit</u>	<u>Unit Price</u>
31	Removal and disposal of asbestos-containing thermal fitting insulation. Removal by full containment method.	EA	\$50.98
32	Removal and disposal of asbestos-containing thermal tape. Removal by full containment method.	LF	\$30.82
33	Removal and disposal of asbestos-containing cement pipe. Removal by full containment method.	LF	\$33.70
34	Removal and disposal of asbestos-containing sheet gasket. Removal by full containment method.	SF	\$29.38
35	Removal and disposal of asbestos-containing rope gasket. Removal by full containment method.	SF	\$35.14
36	Removal and disposal of asbestos-containing flex connector. Removal by full containment method.	EA	\$50.98
37	Removal and disposal of asbestos-containing duct insulation. Removal by full containment method.	SF	\$27.94
38	Removal and disposal of asbestos-containing cement duct. Removal by full containment method.	LF	\$31.54
39	Removal and disposal of asbestos-containing fire dampers. Removal method is to remove the entire fire damper intact.	EA	\$35.86
40	Removal and disposal of asbestos-containing internal boiler insulation. Removal by full containment method.	SF	\$36.58
41	Removal and disposal of asbestos-containing external boiler insulation. Removal by full containment method.	SF	\$29.38
42	Removal and disposal of asbestos-containing tank insulation. Removal by full containment method.	SF	\$27.94
43	Removal and disposal of asbestos-containing breeching/stack insulation. Removal by full containment method.	SF	\$29.38

### ABATEMENT ITEM LISTING

<u>Item Number</u>	<u>Item Description</u>	<u>Unit</u>	<u>Unit Price</u>
44	Removal and disposal of asbestos-containing thermal pipe and fitting insulation. Removal by full containment method.	LF	\$30.82
45	Removal and disposal of asbestos-containing mechanical equipment insulation. Removal by full containment method.	SF	\$29.38
46	Removal and disposal of asbestos-containing electrical wire insulation. Removal by full containment method.	LF	\$27.94
47	Removal and disposal of asbestos-containing lamp reflectors. Removal method is to remove the lamp intact.	EA	\$25.78
50	Removal and disposal of asbestos-containing dust/debris. Removal by full containment method.	SF	\$33.70
51	Removal and disposal of asbestos-containing kiln insulation. Removal by full containment method.	SF	\$35.14
52	Removal and disposal of asbestos-containing fire door lining. Removal method is to remove the fire door intact.	EA	\$36.58
53	Removal and disposal of asbestos-containing stage curtains. Removal by full containment method.	SF	\$27.22
54	Removal and disposal of asbestos-containing stall partitions. Removal by full containment method.	SF	\$27.94
55	Removal and disposal of asbestos-containing splash panels. Removal by full containment method.	SF	\$27.58
56	Removal and disposal of asbestos-containing windowsills. Removal by full containment method.	SF	\$32.26
57	Removal and disposal of asbestos-containing laboratory fume hoods. Removal by full containment method.	SF	\$29.38
58	Removal and disposal of asbestos-containing gloves.	PR	\$22.18
59	Removal and disposal of asbestos-containing fire blankets.	EA	\$26.50

### ABATEMENT ITEM LISTING

<u>Item Number</u>	<u>Item Description</u>	<u>Unit</u>	<u>Unit Price</u>
60	Removal and disposal of asbestos-containing heat shields. Removal by full containment method.	SF	\$26.86
61	Removal and disposal of asbestos-containing napkin incinerator lining. Removal method is to remove the napkin incinerator intact.	EA	\$35.14
62	Removal and disposal of asbestos-containing chalkboards. Removal by partial containment method.	SF	\$27.22
63	Removal and disposal of asbestos-containing tabletops. Removal by partial containment method.	SF	\$27.22
64	Removal and disposal of asbestos-containing sink coating.	EA	\$30.10
65	Removal and disposal of asbestos-containing burner pad.	EA	\$22.18
66	Removal and disposal of asbestos-containing elevator brake shoes.	EA	\$35.14
67	Removal and disposal of asbestos-containing lab oven insulation. Removal by full containment method.	SF	\$32.98
68	Removal and disposal of asbestos-containing safe, cabinet, desk insulation. Removal by full containment method.	SF	\$500.00
70	Removal and disposal of asbestos-containing exterior soils. Removal by modified containment method.	SF	\$30.82
71	Removal and disposal of asbestos-containing exterior siding. Removal by modified containment method.	SF	\$29.38
72	Removal and disposal of asbestos-containing exterior siding shingles. Removal by modified containment method.	SF	\$29.02
73	Removal and disposal of asbestos-containing soffits. Removal by modified containment method.	SF	\$28.66
74	Removal and disposal of asbestos-containing facia. Removal by modified containment method.	SF	\$29.38

### ABATEMENT ITEM LISTING

<u>Item Number</u>	<u>Item Description</u>	<u>Unit</u>	<u>Unit Price</u>
75	Removal and disposal of asbestos-containing exterior plasters. Removal by modified containment method.	SF	\$35.14
76	Removal and disposal of asbestos-containing walkway ceiling. Removal by modified containment method.	SF	\$28.66
77	Removal and disposal of asbestos-containing cement roofing panels. Removal by modified containment method.	SF	\$29.38
78	Removal and disposal of asbestos-containing asphaltic roofing materials. Removal by modified containment method.	SF	\$30.10
79	Removal and disposal of asbestos-containing exterior caulks. Removal by modified containment method.	SF	\$32.26
80	Removal and disposal of asbestos-containing louvers. Removal by modified containment method.	SF	\$29.38
81	Removal and disposal of asbestos-containing cement corrugated roof. Removal by modified containment method.	SF	\$28.66
82	Removal and disposal of asbestos-containing asphaltic vapor barrier. Removal by modified containment method.	SF	\$29.02
83	Removal and disposal of asbestos-containing chimney lining. Removal by full containment method.	SF	\$36.58
84	Removal and disposal of asbestos-containing coal composition ceiling. Removal by full containment method.	SF	\$31.18
85	Removal and disposal of asbestos-containing ceiling tile adhesive. Removal by full containment method.	SF	\$29.38
86	Removal and disposal of asbestos-containing carpet. Removal by full containment method.	SF	\$26.50
87	Removal and disposal of asbestos-containing cement wall. Removal by full containment method.	SF	\$28.66

### ABATEMENT ITEM LISTING

<u>Item Number</u>	<u>Item Description</u>	<u>Unit</u>	<u>Unit Price</u>
88	Removal and disposal of asbestos-containing wall tile adhesive. Removal by full containment method.	SF	\$29.38
89	Removal and disposal of asbestos-containing wall tile. Removal by full containment method.	SF	\$29.38
90	Removal and disposal of asbestos-containing wall and ceiling tile. Removal by full containment method.	SF	\$29.38
91	Removal and disposal of asbestos-containing wall and ceiling tile adhesive. Removal by full containment method.	SF	\$29.38
92	Removal and disposal of other asbestos-containing thermal system insulation. Removal by full containment method.	LF	\$36.58
93	Removal and disposal of other asbestos-containing surfacing material. Removal by full containment method.	SF	\$30.82
94	Removal and disposal of other asbestos-containing miscellaneous material. Removal by full containment method.	SF	\$26.50
100	Conduct repair activities for an asbestos-containing material. Repair activities could include small-scale removal, small-scale encapsulation, small-scale enclosure, and/or repair of damaged areas. Hourly rate includes a 2-person, fully equipped crew to conduct repair activities.	HR	\$129.15
200	Conduct periodic surveillance of the asbestos-containing material. Periodic surveillance is anticipated to be conducted semiannually for 3 years.	MH	\$67.50
201	Institute an operations and maintenance program. Start-up costs include HEPA vacuum, glove bags, plastic, disposal, etc.	LS	\$4,050.00
202	Restock an existing operations and maintenance program to replace depleted supplies.	LS	\$1,080.00



**APPENDIX F**

**U.S. EPA FINAL RULE:  
ASBESTOS-CONTAINING MATERIALS IN SCHOOLS**

***INSERT INFORMATION FROM ORIGINAL ASBESTOS MANAGEMENT PLAN***

**DEPARTMENT OF DEFENSE  
EDUCATION ACTIVITY  
ASBESTOS MANAGEMENT PROGRAM**

**2003  
Operations and Maintenance Manual**

**for**

**Mannheim American High School  
Mannheim-Kaefertal, Germany  
HE 3411**

**Prepared For:**

**Department of Defense Education Activity  
Logistics Division  
4040 North Fairfax Drive  
Arlington, Virginia 22203-1635**

**Prepared By:**

**Baker Environmental, Inc.  
Airside Business Park  
100 Airside Drive  
Moon Township, PA 15108**

The Baker logo consists of the word "Baker" in a white, bold, sans-serif font, centered within a solid black rectangular background.

**Under Contract With:**

**U.S. Army Corps of Engineers  
Transatlantic Programs Center  
Winchester, Virginia**

**OPERATIONS AND MAINTENANCE MANUAL  
FOR  
MANNHEIM AMERICAN HIGH SCHOOL  
HE 3411**

**TABLE OF CONTENTS**

**IMPORTANT FOREWORD**

**SECTIONS**

- 1.0 INTRODUCTION
- 2.0 BACKGROUND: ASBESTOS CHARACTERISTICS AND HEALTH EFFECTS
- 3.0 OPERATIONS AND MAINTENANCE PROGRAM ELEMENTS
- 4.0 EQUIPMENT REQUIREMENTS
- 5.0 RECOMMENDED MANAGEMENT ACTIONS FOR ASBESTOS MATERIALS

**TABLES**

- 5.1 Recommended Management Actions for ACM

**APPENDICES**

- A Operations and Maintenance (O&M) Procedures for ACM
- B Initial and Additional Cleaning Procedures

## IMPORTANT FOREWORD

The information presented herein, together with historical records for this location, satisfies the reporting requirements of the AHERA legislation and DODEA policy regarding Operations and Maintenance Manuals.

**FOR A SUMMARY TABULATION OF WHERE ASBESTOS WAS FOUND, AND WHAT SHOULD BE DONE ABOUT IT, PLEASE REFER TO TABLE 5.1 PRINTED ON BLUE-TINTED PAPER.**

Please also note that not all building materials have been tested. Examples of this may be materials which are hidden from view, inaccessible, or where sampling would be destructive. **THEREFORE, THERE IS NO ASSURANCE THAT UNTESTED MATERIALS ARE ASBESTOS-FREE.**

## **1.0 INTRODUCTION**

The Department of Defense Education Activity (DODEA) has developed and implemented an Asbestos Management Program to help ensure the safety of the occupants of Mannheim American High School and to comply with U.S. Environmental Protection Agency (EPA) regulations issued in 1987 as required by the Asbestos Hazard Emergency Response Act (AHERA).

Implementation of an Operations and Maintenance (O&M) Program is required whenever materials with the potential to release asbestos fibers are found in the buildings. The primary objective of this O&M Manual is to describe work practices and procedures that will prevent the release of asbestos fibers during routine building maintenance and janitorial activities.

This O&M Manual describes initial and periodic cleaning procedures to be utilized in building areas containing asbestos. In addition, it includes descriptions of maintenance and repair procedures that must be followed by custodial and maintenance personnel who work with asbestos-containing materials (ACM).

The Local Education Agency (LEA) Representative responsible for carrying out the O&M Program, as described in the EPA regulations (Title 40 Code of Federal Regulations [CFR] Part 763), is:

Ms. Liisa M. White  
Department of Defense Education Activity  
Logistics Division/Facilities Branch  
4040 North Fairfax Drive  
Arlington, VA 22203-1635  
(703) 696-3850 (ext. 1801)  
(703) 696-4030 (Fax)

The Asbestos Coordinator (AC) designated to carry out the duties of the LEA at Mannheim American High School is:

Mr. Eric Goldman  
Mannheim American High School  
Unit 29939  
APO AE 09086

Telephone: 49-621-722261  
Telefax: 49-621-734901

## **2.0 BACKGROUND: ASBESTOS CHARACTERISTICS AND HEALTH EFFECTS**

Asbestos is the common name for a group of naturally occurring fibrous mineral silicates. Because it is noncombustible and has low thermal conductivity, asbestos has been used extensively in the construction industry in a wide variety of applications.

There are six different types of asbestos: chrysotile, which accounts for approximately 90 percent of all commercially used asbestos; amosite and crocidolite, which are also commonly found in commercial and construction products; and tremolite, actinolite, and anthophyllite which are less commonly used. Asbestos was typically used as a component of materials, such as thermal insulation on pipes, boilers, and air handling ducts, and sprayed-on or troweled-on surfacing materials. Asbestos may also be found in miscellaneous materials such as fire-retardant blankets, cloths and textiles, roofing felts, plasters, cementitious tiles, floor tiles, and flooring adhesives. Damaged or deteriorated ACM may release microscopic fibers which can remain suspended in the air and potentially be inhaled into the lungs.

Inhalation of asbestos fibers has been linked to the development of certain respiratory diseases and of cancers of various internal organs including the lungs, esophagus, larynx, oral cavity, stomach, colon, and kidney. The three most common asbestos-related diseases are: asbestosis (a fibrous scarring of the lungs), lung cancer, and mesothelioma (a cancer of the lining of the chest or abdominal cavity). These diseases do not develop immediately after inhalation of asbestos fibers; it may be 20 years or more before symptoms appear. No safe level of asbestos exposure has yet been determined. Smoking, combined with exposure to asbestos, significantly increases the risk of developing respiratory diseases and cancers. Past studies of unprotected asbestos workers in occupational settings have shown that smoking combined with high levels of exposure to asbestos can increase the risk for development of asbestos-related diseases. An increase in risk of up to 50 times the risk level observed for non-smoking asbestos workers has been documented.

### **3.0 OPERATIONS AND MAINTENANCE PROGRAM ELEMENTS**

The following sections describe the basic practices, procedures, and recommendations of the O&M Program for this school or facility. Implementation of these program components is required for compliance with AHERA. Appendix A contains specific maintenance and repair instructions for the types of ACM identified in this school or facility.

#### **3.1 Informing Workers and Building Occupants**

Maintenance workers, custodians, and building occupants must be informed annually of asbestos materials in the building(s), scheduled and ongoing asbestos-related activities, inspection results, management action(s), and periodic reinspection(s) and surveillance. Short-term workers, such as telephone workers, utility workers, repairmen, and host-nation contractors who could potentially come into contact with asbestos in this school must be informed by the AC of the locations of all known or assumed ACM prior to working in those areas.

Labels that warn of the presence of asbestos must be posted adjacent to both friable and non-friable asbestos materials located in routine maintenance areas such as boiler rooms, ceiling voids, and crawl spaces.

These labels must be posted for all friable and non-friable ACM including materials which have been encapsulated, enclosed, or repaired. All warning labels must be displayed in easily visible locations and must remain posted until the ACM has been completely removed. Labels shall have a brightly colored background printed with the following warning in large capital letters:

CAUTION: ASBESTOS HAZARD  
DO NOT DISTURB WITHOUT PROPER TRAINING  
AND EQUIPMENT

Labels written in both English and the host-nation language shall be posted.



### **3.2     Training Requirements**

Prior to implementation of the O&M Program, AHERA requires that building maintenance and custodial staff receive two hours of asbestos awareness training. The maintenance and custodial staff must receive this training whether or not their work activities will involve contact with, or disturbance of, ACM. Also, all new staff must receive this 2-hour awareness training. For staff whose work activities may disturb ACM, 14 additional hours of training are required. New maintenance and custodial staff employees must receive the required training within 60 days of employment. For schools whose principals do not hire, supervise, or otherwise control building custodians or maintenance personnel, ways to implement the training requirements must be jointly explored with the supporting military installation and/or contracting agency. As outlined in the EPA regulations, training is required for the specific subjects listed below.

#### **WORKER TRAINING OUTLINE**

##### **2-Hour Awareness Training**

- Asbestos uses and types
- Health effects associated with asbestos exposure
- ACM locations in each school building where employees work
- Recognition of ACM damage, deterioration, or delamination
- Name and telephone number of AC, availability and location of Asbestos Management Plan

##### **14-Hour Additional Training**

- Proper ACM handling methods
- Respiratory protection and personal protective equipment
- Review of:
  - Methods to determine management action completion
  - Small-scale, short-duration work activities (projects involving up to 3 square or linear feet of ACM)
  - Contractor accreditation
  - Transport and disposal of asbestos waste
- Worker protection
- Respirator fit-test and hands-on training in respiratory protective measures; work practice procedure review

### **3.3     Respiratory Protection Program**

Before any O&M procedures are initiated, a Respiratory Protection Program, as outlined in Occupational Safety and Health Administration (OSHA) Regulation 29 CFR 1910.134 and 1910.1001, must be implemented and documented for all U.S. government employees whose work activities will involve contact with ACM. A written program must specify standard operating procedures for the use and maintenance of the respiratory protection equipment. The program must include respirator selection, fit-testing, and hands-on training of each employee required to wear a respirator. Respirators selected for use must be approved as protective against particulates (P100) by the National Institute for Occupational Safety and Health (NIOSH). A baseline medical examination and annual examinations as outlined in the OSHA regulation must be provided for each worker required to participate in the Respiratory Protection Program.

Respiratory protection must be utilized by all U.S. government employees when performing any project where the potential for exposure to asbestos fibers exist. The type of respiratory and personal protective equipment required by workers must be established for each area where an O&M activity is scheduled. Initial air monitoring samples must be obtained to determine the concentration of airborne asbestos fibers in each work area. Recommendations for respiratory protection must be consistent with the results of the initial air samples.

The foregoing U.S./OSHA-derived requirements may be waived for host-nation contractor personnel employed under host-nation jurisdiction. Host-nation contractor personnel must use respiratory protection in accordance with host-nation requirements.

### **3.4     Area Restrictions for ACM Related Work**

Access to areas containing either friable or non-friable asbestos materials must be restricted before starting any O&M activity that could disturb the asbestos.

Depending on the O&M activity, restriction of an area will typically use the following procedures:

- Scheduling the activity during hours when the area will be unoccupied;
- Posting signs at all entrances into the area;
- Temporarily shutting off or modifying the air handling system;
- Limiting other sources of air movement in the area; and,
- On occasion, may include isolating the area with air-tight barriers.

Only trained personnel who are necessary to perform the maintenance activity are to be allowed into the restricted area.

### **3.5 Fiber Release Episodes - Procedures and Management**

A fiber release episode may result from damage or deterioration of friable ACM. In the event of a fiber release episode, immediate action must be taken to protect the building occupants and workers from exposure to airborne fibers. Access to the affected area must be restricted. Hazard signs must be posted at all entry ways, and the air handling system to that area shut off. The use of appropriate respiratory protection and protective clothing is required by workers when responding to fiber release episodes.

#### **3.5.1 Minor Fiber Release Episodes**

A minor fiber release episode is the disturbance of no more than 3 square or linear feet or 0.3 square or 1 linear meter of friable ACM. If a minor fiber release episode should occur, the AC must be notified immediately. Properly trained maintenance personnel must take immediate action to clean up the falling or dislodged material and repair the damaged areas of ACM using the following procedures:

- Completely saturate all dislodged material with water;
- Place all dislodged materials into asbestos waste disposal containers;
- Wet wipe all surfaces which may of had dust/debris deposited on the surface;
- Thoroughly clean all surfaces in the area using a high efficiency particulate air (HEPA) vacuum;
- Dispose of all debris, filters, mopheads, and cloths in sealed, labeled, leak-tight containers; and,
- Repair the damaged area of asbestos material with an appropriate encapsulant or an asbestos free material such as spackle, plaster, cement, or insulation. If the damaged area cannot be repaired, physically isolate and restrict access to the area and initiate actions to remove the damaged ACM.

### **3.5.2 Major Fiber Release Episodes**

A major fiber release episode is the disturbance of more than 3 square or linear feet or 0.3 square or 1 linear meter of friable ACM. If a major fiber release should occur, the AC and the Area Office must be notified immediately. The following actions must be taken:

- Restrict entry into the area and post signs at all entrances to prevent access by unauthorized persons; and,
- Temporarily shut off or modify the air handling system and limit other sources of air movement through the area.

Corrective management actions associated with major fiber release episodes must be designed, supervised, and conducted by appropriately qualified persons.

### **3.5.3 Decontamination Procedures**

After handling any ACM, the proper decontamination of tools and personnel must be taken. Decontamination involves:

- Wet wiping any tools involved in the corrective management action.
- HEPA vacuuming protective clothing including hood and booties to remove accumulated asbestos debris.
- Removing protective clothing by turning the clothing inside-out, rolling into a ball, and disposing as asbestos-contaminated waste.
- Before removing respirator, wet wipe your face and the respirator.
- Thoroughly washing any exposed body part which may have come in contact with the ACM.

### **3.6 Waste Handling and Disposal**

All asbestos-contaminated waste materials are to be handled, transported, and disposed of in a manner that prevents all visible emissions. All protective polyethylene disposable coveralls, respirator filters, vacuum cleaner, and wastewater used in O&M activities must be considered "asbestos wastes". All asbestos should be placed in 0.20 mm polyethylene bags that have pre-printed asbestos warning labels affixed to the bags. The AC should maintain a supply of these bags.

Asbestos-containing and asbestos-contaminated material must be placed into sealable 0.20 mm polyethylene bags while still wet. Do not overfill or place more than 10 kg into it. The bag should then be evacuated with a HEPA vacuum. It should be sealed by twisting the top 15 cm closed and wrapping with a minimum of two (2) layers of duct tape. Twist the top, fold over, and then apply a second wrap of duct tape. Clean the outside of the disposal bag by wet wiping. Finally, place the bag into a second properly labeled 0.20 mm polyethylene bag.

If sharp objects are to be disposed of, these should be placed in a puncture proof container such as a fiber board box and then bagged.

Excess wastewater generated from wetting procedures should be containerized and disposed of through a series of two (2) sock filters. The first filter is 100 micron pore size and filters out large particulates. The second filter is 5 micron pores and filters out smaller particulates. The water can then be disposed of as uncontaminated waste. The used filters must then be disposed of as asbestos-contaminated waste.

In addition, to load, transport, unload, and for final disposal of asbestos-containing and asbestos-contaminated materials, disposal should be in accordance with base procedures and the host-nation regulations and procedures.

### **3.7 Maintenance and Repair Request Permit System**

The presence of ACM in buildings requires the establishment of a standardized and coordinated procedure for reviewing work order requests. This is necessary to: a) prevent unauthorized or untrained individuals from performing work that could potentially release asbestos fibers into the building environment, b) ensure that asbestos-related work activities, other than small-scale, short-duration projects (projects involving more than the amount of ACM specified in Appendix A of this manual), are designed and conducted by qualified persons. A program should be instituted in which all work requests, including those for renovations, repairs, etc., are first forwarded to the AC for approval.

The AC should review all work order requests to determine if the requested project activities could disturb ACM in the proposed work area. Absolutely no work activities should be permitted prior to this review process. For areas where intended work could cause asbestos fiber release, specific work procedures and equipment should be specified on the work permit.

### **3.8     Recordkeeping**

The EPA Regulations require that O&M plans and records be maintained in both a central location at the facility's administrative office and at the Area Office. These records should be kept on file with the Asbestos Management Plan or entered into appropriate sections of the Asbestos Management Plan and include the following:

- For areas where all ACM has been removed, records pertaining to those areas must be kept for a period of at least 3 years following the next reinspection date.
- For material management actions:
  - Name/signature of person(s) who collected air samples for work completion verification
  - Air sample location and date
  - Name/address of laboratory performing the air sample analysis
  - Date/method/results of analysis
  - Name/signature of person(s) performing analysis
  - Laboratory certification verification
- For cleaning activities conducted in areas of ACM:
  - Date/name of person(s) conducting the cleaning
  - Location cleaned
  - Methods used
- For individuals requiring training as outlined in Section 3.2:
  - Name and job title
  - Date and location of training
  - Number of training hours completed
  - Date of last medical surveillance examination, where applicable

- For other activities under the scope of the O&M Program:
  - Name of persons performing the activity
  - Initiation/completion date of the specific activity
  - Location/description of the activity, including preventive measures
  - Name and location of storage or disposal site if ACM is removed during the activity
- For each fiber release episode:
  - Date/location of the episode
  - Repair method
  - Preventive measures or management action taken
  - Name/location of storage/disposal site if ACM is removed during the activity

### **3.9 Periodic Surveillance**

All ACM identified in the building(s) shall be visually inspected by a designated person at least once every six months. The purpose of the surveillance is to determine if changes in the condition of the ACM have occurred and caused the ACM to become damaged or friable.

The AC will maintain a record of the surveillance and any observed changes of the material in the facility's Asbestos Management Plan.



#### **4.0 EQUIPMENT REQUIREMENTS**

The following equipment and materials are required, as applicable, for implementing the recommended O&M Program:

##### **RECOMMENDED INVENTORY FOR ASBESTOS O&M PROGRAM EQUIPMENT**

<b>Item</b>	<b>Quantity</b>
"Danger Asbestos" Labeled Bags 75/Roll	1
6 mil Polyethylene Sheeting 10' X 100' Roll	1
Bridging Encapsulant 5 Gal Container	1
Duct Tape 10/Box	1
Garden Sprayer	1
Half Face Respirators	2
HEPA Filter Vacuum	1
P100 Respirator Cartridges 10/Box	1
Signs and Placards	1
Tyvek Suits 25/Box	1

## **5.0 RECOMMENDED MANAGEMENT ACTIONS FOR ASBESTOS MATERIALS**

Table 5.1 presents detailed recommended management actions for all ACM present during the 2003 AHERA Inspection (2003 inspection). The information on Table 5.1 is grouped by building for each building included in the 2003 inspection. Table 5.1 lists asbestos materials, identifies their location(s), friability, recommends material management action(s), lists material management procedures specific for each material, and notes if cleaning of the functional spaces where the material is located is required.

The recommended management action(s) provides detailed instructions for the management of the asbestos materials identified by the 2003 inspection. The Material Management Procedures, found in Appendix A, provide material-specific procedures for surveillance, labeling, and maintenance and repair of asbestos materials identified at Mannheim American High School. Appendix B provides procedures for initial and additional cleaning of functional spaces where asbestos materials have been identified.

**MANNHEIM AMERICAN HIGH SCHOOL**

**HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS FOR ACM**

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	FRI- ABLE	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)	MATERIAL MANAGEMENT PROCEDURE	CLEANING REQUIRED
0286 (Unknown)	004	SHEET GASKET (2" - 6" DIAMETER, RED, ON PIPE FLANGE CONNECTIONS)	NO	ART SUPPLY ROOM 2, HEAT EXCHANGER AREA, HVAC 1, HVAC 2, SUPPLY ROOM		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	GASKET MATERIAL AND FLEX CONNECTORS	NO
0286 (Unknown)	005	VINYL FLOOR TILE (1' X 1' ORANGE WITH RED STREAKS)	NO	100, 105, 106	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #046. THIS MATERIAL IS LOCATED BELOW THE EXISTING FLOORING MATERIAL.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	VINYL FLOOR TILE OR SHEETING	NO
0286 (Unknown)	006	CEMENT DUCT (18" X 18" X 36" GRAY, FLUE PIPE)	NO	100, 105, 106, 200, 207, 208		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	ASBESTOS CEMENT ITEMS	NO
0286 (Unknown)	007	VINYL FLOOR TILE (1' X 1' BEIGE)	NO	102, 212A, 214A	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #075.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	VINYL FLOOR TILE OR SHEETING	NO
0286 (Unknown)	026	CEMENT WALL PANELS (3' X 8' WHITE)	NO	116, 116A		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	ASBESTOS CEMENT ITEMS	NO

# MANNHEIM AMERICAN HIGH SCHOOL

HE 3411

TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS FOR ACM

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	FRI-ABLE	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)	MATERIAL MANAGEMENT PROCEDURE	CLEANING REQUIRED
0286 (Unknown)	032	VINYL FLOOR TILE (10" X 10" BEIGE)	NO	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #047.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	VINYL FLOOR TILE OR SHEETING	NO
0286 (Unknown)	035	CEMENT WALL PANELS (GRAY, DEFLECTOR PANEL BOARD)	NO	ROOF		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	ASBESTOS CEMENT ITEMS	NO
0286 (Unknown)	038	CEMENT WALL PANELS (4' X 8' WHITE)	NO	110, 110A, 112		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	ASBESTOS CEMENT ITEMS	NO
0286 (Unknown)	046	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' ORANGE WITH RED STREAKS VINYL FLOOR TILE)	NO	100, 105, 106	THIS IS THE ADHESIVE FOR MATERIAL #005.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	FLOOR ADHESIVE (MASTIC)	NO
0286 (Unknown)	047	FLOOR ADHESIVE (BLACK, UNDER 10" X 10" BEIGE VINYL FLOOR TILE)	NO	126, 127, 128, 129, 130, 223, 224, 225, 226, 227	THIS IS THE ADHESIVE FOR MATERIAL #032.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	FLOOR ADHESIVE (MASTIC)	NO

**MANNHEIM AMERICAN HIGH SCHOOL**

**HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS FOR ACM**

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	FRI-ABLE	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)	MATERIAL MANAGEMENT PROCEDURE	CLEANING REQUIRED
0286 (Unknown)	084	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' WHITE WITH BLUE AND BLACK STREAKS VINYL FLOOR TILE)	NO	216	THIS IS THE ADHESIVE FOR MATERIAL #023.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	FLOOR ADHESIVE (MASTIC)	NO
0286 (Unknown)	089	FLOOR ADHESIVE (BLACK, UNDER 9" X 9" GRAY VINYL FLOOR TILE)	NO	CORRIDOR D, 109, 110, 110A, 110C, 113A, 116, 116A, 116B, 211	THIS IS THE ADHESIVE FOR MATERIAL #022. SIX SF OF THIS MATERIAL ARE EXPOSED AND NEED TO BE REPAIRED.	1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT. 2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS. 3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED. 4. CONSULT THE O & M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL. 5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	FLOOR ADHESIVE (MASTIC)	NO
0286 (Unknown)	090	FLOOR ADHESIVE (BLACK, UNDER 1' X 1' GRAY WITH BLACK STREAKS VINYL FLOOR TILE)	NO	111, 111B, 111C	THIS IS THE ADHESIVE FOR MATERIAL #025.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	FLOOR ADHESIVE (MASTIC)	NO
0286 (Unknown)	091	FLOOR ADHESIVE (BLACK, UNDER 9" X 9" RED WITH WHITE AND BLACK STREAKS VINYL FLOOR TILE)	NO	218A	THIS IS THE ADHESIVE FOR MATERIAL #037.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	FLOOR ADHESIVE (MASTIC)	NO

**MANNHEIM AMERICAN HIGH SCHOOL**

**HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS FOR ACM**

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	FRI-ABLE	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)	MATERIAL MANAGEMENT PROCEDURE	CLEANING REQUIRED
0286 (Unknown)	133	SHEET GASKET (2" - 6" DIAMETER, GRAY, ON PIPE FLANGE CONNECTIONS)	NO	HEAT EXCHANGER AREA		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>	GASKET MATERIAL AND FLEX CONNECTORS	NO
0286 (Unknown)	136	VINYL FLOOR TILE (10" X 10" WHITE WITH BLACK STREAKS)	NO	STORAGE 5	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #137. THREE SF OF THIS MATERIAL ARE DAMAGED AT THE DOORWAY AND NEED TO BE REPAIRED.	<ol style="list-style-type: none"> <li>1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT.</li> <li>2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS.</li> <li>3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED.</li> <li>4. CONSULT THE O &amp; M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL.</li> <li>5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>	VINYL FLOOR TILE OR SHEETING	NO
0286 (Unknown)	137	FLOOR ADHESIVE (BLACK, UNDER 10" X 10" WHITE WITH BLACK STREAKS VINYL FLOOR TILE)	NO	STORAGE 5	THIS IS THE ADHESIVE FOR MATERIAL #136.	<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>	FLOOR ADHESIVE (MASTIC)	NO
0736 (Unknown)	055	SHEET GASKET (2" - 6" DIAMETER, BLACK, ON PIPE FLANGE CONNECTIONS)	NO	BALCONY 2, BOILER ROOM		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>	GASKET MATERIAL AND FLEX CONNECTORS	NO

**MANNHEIM AMERICAN HIGH SCHOOL**

**HE 3411**

**TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS FOR ACM**

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	FRI- ABLE	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)	MATERIAL MANAGEMENT PROCEDURE	CLEANING REQUIRED
0736 (Unknown)	130	SHEET GASKET (2" - 6" DIAMETER, RED, ON PIPE FLANGE CONNECTIONS)	NO	BOILER ROOM		<ol style="list-style-type: none"> <li>1. NO IMMEDIATE ABATEMENT REQUIRED.</li> <li>2. CONSULT THE O &amp; M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL.</li> <li>3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>	GASKET MATERIAL AND FLEX CONNECTORS	NO
0746 (Unknown)	003	VINYL FLOOR TILE (9" X 9" BLUE)	NO	B4, B4A, B5	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #080. 13 SF OF THIS MATERIAL ARE DAMAGED AND NEED TO BE REPAIRED IN ROOMS B4 AND B5.	<ol style="list-style-type: none"> <li>1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT.</li> <li>2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS.</li> <li>3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED.</li> <li>4. CONSULT THE O &amp; M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL.</li> <li>5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>	VINYL FLOOR TILE OR SHEETING	NO
0746 (Unknown)	008	VINYL FLOOR TILE (9" X 9" BLACK WITH WHITE STREAKS)	NO	DARKROOM	THE ADHESIVE FOR THIS MATERIAL IS MATERIAL #070. SIX SF OF THIS MATERIAL ARE DAMAGED AND NEED TO BE REPAIRED.	<ol style="list-style-type: none"> <li>1. PORTIONS OF THIS MATERIAL SHOULD BE REPAIRED WITHIN ONE YEAR OF RECEIPT OF THIS REPORT.</li> <li>2. THE REPAIR PROJECT MUST BE DESIGNED AND CONDUCTED BY EPA QUALIFIED PERSONS IN ACCORDANCE WITH AHERA REGULATIONS.</li> <li>3. FOR THE REMAINDER OF THIS MATERIAL, NO IMMEDIATE ABATEMENT IS REQUIRED.</li> <li>4. CONSULT THE O &amp; M MANUAL CONCERNING SAFE PROCEDURES FOR BOTH THE REPAIRED PORTIONS AND THE REMAINDER OF THIS MATERIAL.</li> <li>5. CONTINUE SURVEILLANCE OF ALL OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.</li> </ol>	VINYL FLOOR TILE OR SHEETING	NO

# MANNHEIM AMERICAN HIGH SCHOOL

HE 3411

TABLE 5.1 - RECOMMENDED MANAGEMENT ACTIONS FOR ACM

BUILDING NUMBER	HOMO. MTRL. NO.	MATERIAL TYPE (MATERIAL DESCRIPTION)	FRI-ABLE	MATERIAL LOCATION(S)	COMMENTS	RECOMMENDED MANAGEMENT ACTION(S)	MATERIAL MANAGEMENT PROCEDURE	CLEANING REQUIRED
0746 (Unknown)	053	FIRE DOOR LINING (WHITE, ENCLOSED IN METAL)	NO	B4	THERE ARE 3 SINGLE DOORS AND 1 DOUBLE DOOR (2 EACH).	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	REMOVABLE ITEMS	NO
0746 (Unknown)	055	CEMENT WALL PANELS (BLACK CEMENT)	NO	B5		1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	ASBESTOS CEMENT ITEMS	NO
0746 (Unknown)	070	FLOOR ADHESIVE (YELLOW, UNDER 9" X 9" BLACK WITH WHITE STREAKS VINYL FLOOR TILE)	NO	DARKROOM	THIS IS THE ADHESIVE FOR MATERIAL #008.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	FLOOR ADHESIVE (MASTIC)	NO
0746 (Unknown)	148	CAULK (GRAY)	NO	B4	THIIS MATERIAL IS LOCATED AROUND THE DOORS LEADING TO STORAGE 1 AND STORAGE 2.	1. NO IMMEDIATE ABATEMENT REQUIRED. 2. CONSULT THE O & M MANUAL CONCERNING SAFE CUSTODIAL PROCEDURES FOR THIS MATERIAL. 3. CONTINUE SURVEILLANCE OF THIS MATERIAL UNDER THE ASBESTOS MANAGEMENT PLAN.	SEALANT MATERIALS	NO



## **APPENDIX A**

### **OPERATIONS AND MAINTENANCE (O&M) PROCEDURES FOR ACM**

**MATERIAL MANAGEMENT PROCEDURE FOR:** Asbestos Cement Items (e.g., non-friable heat shields, roofing, transite, firedampers, shutters, louvers)

**INITIAL AND ADDITIONAL CLEANING:** Refer to Table 7.1 in the Asbestos Management Plan

**SURVEILLANCE:** Refer to requirements in Section 3.9

**LABELING:** Refer to requirements in Section 3.1

**MAINTENANCE AND REPAIR PROCEDURES:**

Damaged asbestos cement items such as heat shields, roofing, transite, firedampers, and other similar materials should be replaced rather than repaired. Repair of damaged areas 1.0 square meter or less in size must be conducted if immediate removal and replacement is not feasible. Material management actions for areas greater than 1.0 square meter in size must be designed and conducted by qualified personnel.

Removal: To remove 1.0 square meter or 1.0 linear meter or less of asbestos cement materials:

- Thoroughly wet all surfaces, especially edges, using a spray bottle
- Carefully remove material using only hand tools
- Clean up area in accordance with Appendix B
- Dispose of all debris in accordance with Section 3.6

Repair of Surface Areas: Repair of less than 1.0 square meter of asbestos cement surface on floor, wall, or ceiling areas may be repaired by application of non-asbestos cement or other similar patching compound.

Restricted Activities: Maintenance staff must avoid activities that will damage asbestos cement materials. For example:

- Do NOT cut, saw, or drill holes in asbestos cement products
- Do NOT use power tools
- Do NOT use abrasive materials on asbestos cement products
- Do NOT use an ordinary vacuum or dry sweeping to clean up debris

**MATERIAL MANAGEMENT PROCEDURE FOR:** Floor Adhesive (Mastic)

**INITIAL AND ADDITIONAL CLEANING:** Refer to Table 7.1 in the Asbestos Management Plan

**SURVEILLANCE:** Refer to requirements in Section 3.9

**LABELING:** Not Applicable

**MAINTENANCE AND REPAIR PROCEDURES:**

Projects accomplished by trained personnel should not exceed 1.0 square meter.

Removal: To remove floor tile adhesive:

- Soak material with hot water
- Remove damaged overlying tile with hand tools
- Remove adhesive material with hand tools
- Clean work area in accordance with Appendix B
- Dispose of all debris in accordance with Section 3.6

Restricted Activities: Maintenance staff must avoid activities that will damage floor adhesive:

- Never dry-grind floor adhesive
- Never dry-scrape floor adhesive

**MATERIAL MANAGEMENT PROCEDURE FOR:** Gasket Material and Flex Connectors

**INITIAL AND ADDITIONAL CLEANING:** Refer to Table 7.1 in the Asbestos Management Plan

**SURVEILLANCE:** Refer to requirements in Section 3.9

**LABELING:** Refer to requirements in Section 3.1

**MAINTENANCE AND REPAIR PROCEDURES:**

The procedures below must be followed to protect building occupants if these materials require maintenance or repair.

Repair: Do not repair damaged gaskets or flex connectors. Replace with non-asbestos materials.

Removal: To remove and replace:

- Shut down ventilation system, if applicable
- Isolate air duct section, if applicable
- Thoroughly wet exposed material using a spray bottle
- Loosen bolts on flanges holding material in place
- Carefully remove all material, periodically wetting with water from a spray bottle
- Thoroughly clean entire area in accordance with Appendix B
- Dispose of all debris in accordance with Section 3.6

Restricted Activities: Maintenance staff must avoid activities that will damage gasket cloth materials. For example:

- Do NOT cut, saw, or drill holes in gaskets or connectors
- Do NOT damage intact material
- Do NOT use an ordinary vacuum or dry sweeping to clean debris

## **MATERIAL MANAGEMENT PROCEDURE FOR: Removable Items**

**INITIAL AND ADDITIONAL CLEANING:** Refer to Table 7.1 in the Asbestos Management Plan

**SURVEILLANCE:** Refer to requirements in Section 3.9 if items are not removed immediately

**LABELING:** Not Applicable

### **MAINTENANCE AND REPAIR PROCEDURES:**

Small removable items such as Bunsen burner pads, hot plate pads, gloves, etc., should be removed and replaced with non-asbestos items. Use the following procedures:

- Wet all items with spray bottle
- Clean up any debris or residue in accordance with Appendix B
- Dispose of items in accordance with Section 3.6

Large removable items such as sinks with ACM lining, kilns, file cabinets, safes, etc., should be removed and replaced with non-asbestos items. Use the following procedures:

- Wet exposed ACM surfaces with spray bottle
- Double wrap item in 6 mil polyethylene
- Affix warning label (which may be cut off smaller disposal bags and taped on)
- Clean up any debris or residue in accordance with Appendix B
- Dispose of items in accordance with Section 3.6

The removal of ACM from electrical equipment, (e.g., electrical cords) must be performed on disconnected electrical equipment. This type of removal should be performed only by personnel knowledgeable and proficient in both electrical equipment repair and asbestos removal techniques. To prevent potential shock hazards, these materials must not be wetted until disconnected and not adjacent to energized wires and equipment.

**SAFE CUSTODIAL PROCEDURES:**

Routine cleaning and dusting will be accomplished on large removable items such as safes and file cabinets by misting and wet wiping. Dry wiping techniques will not be used.

## **MATERIAL MANAGEMENT PROCEDURE FOR: Sealant Materials**

**INITIAL AND ADDITIONAL CLEANING:** Refer to Table 7.1 in the Asbestos Management Plan

**SURVEILLANCE:** Refer to requirements in Section 3.9

**LABELING:** Refer to requirements in Section 3.1

### **MAINTENANCE AND REPAIR PROCEDURES:**

The following procedures must be followed to protect building occupants if sealant materials require maintenance or repair. These procedures apply only to activities involving 1.0 meter or less of material.

Repair: To repair damaged area:

- Patch holes, gouges or rips with compatible non-asbestos patching material
- Cover repaired area with exterior grade latex paint or penetrating encapsulant
- Clean work area in accordance with Appendix B

Restricted Activities: Maintenance staff must avoid activities that will damage sealant materials. For example:

- Do NOT cut, saw, or drill material
- Do NOT lean items against surfaces covered by sealant materials
- Do NOT rub abrasively on surfaces of sealant materials

**MATERIAL MANAGEMENT PROCEDURE FOR:** Vinyl Floor Tile or Sheeting

**INITIAL AND ADDITIONAL CLEANING:** Refer to Table 7.1 in the Asbestos Management Plan

**SURVEILLANCE:** Refer to requirements in Section 3.9

**LABELING:** Not Applicable

**MAINTENANCE AND REPAIR PROCEDURES:**

Damaged vinyl floor material should be replaced rather than repaired. Projects accomplished by trained personnel should not exceed 1.0 square meter.

Removal: To remove floor tile or section of vinyl sheeting:

- Soak material with hot water
- Remove tile or sheet with hand tools
- Clean work area in accordance with Appendix B
- Dispose of all debris in accordance with Section 3.6

Restricted Activities: Maintenance staff must avoid activities that will damage vinyl floor material. For example:

- Do NOT cut, saw, or drill holes in vinyl material
- Do NOT use power sanders or chippers
- Do NOT perform dry stripping
- Do NOT use power disc strippers with steel wool pads
- Buff at slow speeds (175-190 RPM) with a low abrasive pad



## **APPENDIX B**

### **INITIAL AND ADDITIONAL CLEANING PROCEDURES**

## INITIAL AND ADDITIONAL CLEANING PROCEDURES

For each area where friable ACM, damaged or significantly damaged thermal system ACM insulation, or damaged friable suspected ACM, was identified during the inspection, an initial cleaning is required. This cleaning must occur prior to any management actions, other than O&M activities or repairs, unless an equivalent cleaning has been performed within the previous 6-month period.

Table 5.1 identifies the locations requiring initial and additional cleaning.

Before any cleanup or O&M procedures are initiated, all persons conducting the cleanup must be examined by a physician to verify that each person can safely wear a respirator. Respirators must be fit-tested for each individual to ensure that the person will not be breathing contaminated air. During all cleanup and O&M procedures, the respirators will be worn at all times.

### 1. Friable Surfacing ACM Area Cleaning

The following equipment is required for conducting cleaning operations:

- HEPA filtered vacuum
- Steam carpet cleaner
- Large 6 mil plastic bags
- Cloths and mops
- Spray bottle
- Half and full facepiece air-purifying respirators with dual replaceable P100 cartridges
- Protective clothing (Tyvek)

NOTE: Exercise caution when using water around electrical fixtures and outlets.

All carpets in rooms containing ACM should be cleaned first with a HEPA filtered vacuum and then by a steam cleaner. All curtains and books exposed to the ACM should be HEPA vacuumed. Vacuum bags and filters should be placed in sealed 6 mil plastic bags for disposal.

Wet mop all other floors in the rooms where ACM is located. All shelves and other horizontal surfaces should be wiped with damp cloths. Use a mist spray bottle to keep the cloths damp. Cloths and mopheads must then be discarded in sealed and labeled 6 mil plastic bags.

The following cleaning procedures must be conducted whenever asbestos-containing debris is discovered.

- If there is visible asbestos debris in the area, immediately put on a respirator and continue the cleaning procedures as described in this section.
- Spray with water any debris found near friable surfacing ACM and place the debris in labeled 6 mil plastic bags using a dust pan. Thoroughly rinse the dust pan with water in a utility sink. Immediately report the presence of debris to the AC. **DO NOT SWEEP ASBESTOS DEBRIS WITHOUT THOROUGHLY WETTING IT FIRST.**
- HEPA vacuum and steam clean all carpets.
- Wet mop all other floors and wipe all other horizontal surfaces with damp cloths.
- Dispose of all debris, filters, mopheads, and cloths in labeled 6 mil plastic bags in accordance with local regulations for disposal of asbestos waste.

## 2. Thermal System Insulation Cleaning

The following equipment is required for conducting cleaning operations:

- HEPA filtered vacuum
- Steam carpet cleaner
- Large 6 mil plastic bags
- Cloths and mops
- Spray bottle
- Half and full facepiece air-purifying respirators with dual replaceable P100 cartridges
- Protective clothing

All floors should be HEPA vacuumed then wet mopped in the rooms where the pipe or boiler/tank insulation is located. HEPA vacuum and steam clean all carpets contaminated with asbestos-containing thermal system insulation. All shelves and other horizontal surfaces should be wiped with damp cloths. Use a mist spray bottle to keep the cloths damp. Air filters that are potentially contaminated by ACM fibers should be sprayed with water, removed carefully, and properly bagged prior to disposal. Air handling equipment, including ducts and room areas supplied by the potentially contaminated system, must be thoroughly cleaned using HEPA-equipped vacuums prior to filter replacement. Cloths, mopheads, and filters should be discarded in sealed, labeled 6 mil plastic bags according to local regulations for removal and disposal of asbestos waste.

## 3. Cleaning Procedures for Miscellaneous ACM Areas

Most ACM that is not either surfacing material or thermal system insulation is non-friable. Items such as vinyl asbestos floor tiles, ceiling tiles, transite pipes, and gaskets are examples of materials that are usually considered to be non-friable. Specialized cleaning procedures are not necessary for these materials unless they have sustained damage. If these materials are damaged, the cleaning procedures described for thermal system insulation should be implemented until repair of the material has been completed.